

# An Analysis of the Use of Relevance Theory and Theory of Mind as Methods of Cooperation in Richard Mosse's Broken Spectre



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## Introduction:

Broken Spectre is an installation of photographs and film created by Richard Mosse alongside cinematographer Trevor Tweeten and composer Ben Frost. It is an exposition of the drivers behind the ecological destruction of the Brazilian Amazon rainforest, an attempt to tell part of a wider story of climate change. The film was shot in various locations around the Brazilian Amazon over three years of shoots and post-production<sup>1</sup>. Richard says that through the film, he is “trying to find a way to express deeply complex things by looking at these loaded landscapes. Bigger subjects that the camera can't necessarily see.”<sup>2</sup> This is his reasoning behind using traditionally unconventional methods of filming and presenting his work, claiming that his practice exists between the spaces of documentary photography and contemporary art.<sup>3</sup> This alternative way of viewing the problem requires more cognitive load than traditional photojournalism; however, Mosse says that ‘Photography is at the heart of understanding the velocity of deforestation’<sup>4</sup> and that it is important to present the information in a new way as ‘if we've seen one picture of a burning rainforest, we've seen them all in a way’<sup>5</sup>. To further analyse the narrative Mosse has set, it is imperative to consider the relevance of why Mosse has chosen to represent his narrative in this way, and to relate this to the way in which he is thinking about the complex problem. For this, this essay will look at the use of both Relevance Theory (RT) (Sperber & Wilson, 1987) and Theory of Mind (ToM) (Premack & Woodruff, 1978).

Relevance Theory is a theory of human communication and accuracy within that communication, first written in depth about by Dan Sperber and Deirdre Wilson in 1987. They say that “to communicate is to claim someone's attention, and hence to imply that the information communicated is relevant. We call this idea, that communicated information comes with a guarantee of relevance, the principle of relevance.”<sup>6</sup>

Sperber & Wilson discuss Relevance Theory (RT) as a form of communication. However, I will discuss it as a method of cooperation, as it inherently requires a system of cooperation between the ‘speaker’ or communicator and the ‘listener’ or interpreter. The theory suggests that it is the role of the communicator to try and make what they are saying maximally relevant to the interpreter based on their shared cognitive environment. It also suggests that interpreters are using what they know about the communicator and their shared cognitive environment to update their mental representations of the context and infer the communicators intended meaning. (Sperber & Wilson, 1987).

Using the deep context of knowledge of Mosse's other expositions of injustices around the world, shared cognitive environments, setting and salience Richard Mosse enacts a high level of observed relevance to enable interpreters of the installation to see and engage with the content in a more profound and complex way than traditional forms of climate destruction communication. This high level of relevance demands and enables significantly higher cognitive load to be applied by the interpreters.

Theory of Mind (ToM) can be described as ‘the ability we have as human beings, to understand other human beings, not in terms of how they behave, but in terms of what they feel and think.’<sup>7</sup> We do not need to see any physical enactment of the emotions or thoughts to make predictions or theories about what the other is thinking. It is a key part of social cognition; communication and it is essential to any higher level of cooperation. While it sounds similar to empathy, they are distinct as unlike empathy ToM has no links to sharing the others’ emotions, beliefs or thoughts, only understanding it (Blair et al. 1996).

Thought to occur early in childhood development, Theory of Mind is essential to our social led lives. While it is formally a method of social cognition and communication, when used effectively it is a great tool to enhance and to allow deeper analysis of communication and result in more effective cooperation. (Martin Davies, Tony Stone, 1995)

Using ToM Richard Mosse is able to portray more abstract and metaphorical messaging than he would be able to do without. His messaging and the relevance which he builds into the installation heavily relies upon people’s ability to apply ToM to his work and connect the sometimes semi-ambiguously placed clues to the overall narrative.

The use of ToM and RT are essential to understanding the narrative created by Mosse. For example, being able to see the links between the macro, human and micro scales as one interconnected story relies heavily on the knowledge that Mosse placed these sequences next to each other intentionally (ToM) and that there must be reasoning behind why he did this, making the interpreter look for a narrative throughout the three sequences, as they are being told that these scales and their sequence is optimally relevant (RT).

### **Section I: ‘Tools of Cooperation’**

There are several other uses of tools of cooperation and communication in Richard Mosse’s Broken Spectre. One of the first is Cognitive Metaphor Theory (CMT), stating that metaphors are not merely ‘ornamental’ to language, but can be what shapes our understanding of the world (Lakoff & Johnson, 1980). CMT works particularly well alongside Relevance Theory, as using CMT effectively can often provide more relevance to a form of communication, therefore providing better understanding and improved cooperation.

Use of CMT in Broken Spectre starts with the title ‘Broken Spectre’. Spectre has a few different meanings, the predominantly as depictions of light, something feared or ghosts. These meanings, in the context of this installation and in junction with the fact that Richard Mosse is a photographer, and this installation is photography and film allows for the assumption that this project is about capturing or bringing to light something feared or something soon to be a ghost. The word ‘broken’ is likely referencing the fact that what is being presented is just part of an image that we cannot see wholly or clearly; as ecological destruction and climate change famously is. This likely suggests that the installation is looking to bring a fragmented view of the coming to pass of something feared, something which could soon be dead and something that once dead will haunt us. As the lack of an amazon (widely referred to as the earths lungs) will haunt humanity if it is killed. This cognitive metaphor depicts the destruction of the Amazon as something difficult to see in full, something to fear and something that will come back to haunt us if it is killed.

Shared intentionality is also present in Broken Spectre, as the story goes through several scopes and perspectives with the common viewpoint of the importance of ecological systems. Throughout the journey our human shared intentionality to see the destruction of wildlife as a negative thing is integral to the installation’s efficacy of communication. (Tomasello, 2010)

Similar to shared intentionality in this context is the system of reciprocal altruism, it is present and essential to the effective communication as it leads to the thought process which connects the insatiable western diet for consumption with understanding that we require the Amazon and ecological systems like it in order to live in a hospitable planet. It is understood that we need to act more altruistically (reduce our consumption of goods) for the reciprocal action of people taking better care of vast and essential ecological systems. (Trivers, 1971)

Cumulative culture and cognition describe the system of cooperation in which people accumulate knowledge and practices over generations. This is an important part of the story in Broken Spectre as the widespread and industrial destruction of the rainforest system is owed to our compounding abilities to more efficiently and effectively remove rainforest and intensively farm cattle, log, mine and generally destroy ecological systems to create

economically productive resources. (Tennie, Call, & Tomasello, 2009)

Religion and Ritual were also evident as systems of communication in the narrative, primarily depicted through the loggers. Mosse created the familiar trope of the classic Western and the ritual which involves taking rough and untamed land and making it heel to the needs or wants of the Cowboys. This link was likely created to further the relevance of these destroyers of nature, relating them to western figures which are still relatively revered despite the ecological and social genocides they committed. The other link to Religion and Ritual is through the interaction with the indigenous tribes' people, who have rituals and norms which are far more aligned with the preservation and protection of the natural systems around them.

These systems of cooperation, while being integral to the narrative of Broken Spectre, all play into Relevance Theory and/or Theory of Mind.

Relevance Theory (RT) and Theory of Mind (ToM) both play an important role in the exhibition, in the use of each other and in the other rules of cooperation outlined above. Both also stand on their own as essential players in the methods of communication and cooperation exhibited in this installation. The fact that the installation has no spoken words other than a single 3–4-minute monologue near the middle of the video, yet has a clear, complex and impactful narrative showcases the importance for RT and ToM in both the making of the film and the analysis.

Without a direct narration the interpreter needs a decent idea about what the director and cinematographer are thinking about when showing the scenes, this is done through ToM. These scenes have an inbuilt degree of relevance due in part to the setting, an esteemed gallery in central London, which brings the assumption that what you will see at this establishment will be relevant. Alongside the added relevance of the film being made by a prominent artist, journalist and photographer. This knowledge that what is being shown to the interpreter is directly relevant to what the presenter is attempting to communicate enables the additional cognitive effort of using ToM to interpret the installation as a coherent, single and prominent narrative.

## Section II: 'Relevance Theory (RT)'

Relevance theory (RT), generally considered a tool of linguistic communication over a tool of wider communication or cooperation; however, they are intrinsically linked. It has been argued RT can have broader uses, such as the applicability of RT in images or artwork as well as of linguistics. (Kolaiti, 2020) RT is not a coded model of communication and falls under pragmatics, allowing us to create a better account of the way people communicate. Inference and RT allows communication to bridge the gap between semantic representations of sentences and the actual thoughts being communicated. (Sperber & Wilson, 1987). There are some differences applying RT to images, film or text to speech, as images or film can be fed to large populations of people and therefore is more open to misinterpretation, as the communicator cannot adjust what is being said based on the interpreter's reactions or cognitive environments. (Forceville, 2014)

Convention and Aptness are also essential in using RT to interpret utterances, convention helps the interpreter to understand what it means, and aptness helps them apply it to their current situation. In effective communication something can be relevant, but if it is not conventional or apt, then it is decreasingly likely that the interpreter would gain much from the interaction, defeating the purpose of the communication technique.

While the early work on RT, such as the work by Sperber & Wilson focusses on RT in terms of spoken or written communication, it has since been more widely accepted to be a valuable communicative and cooperative tool for visual forms of communication. This is because visual communication follows many of the same cognitive rules as linguistic communication. Due to this wide applicability in the world of narrative RT has become widely used to analyse not only spoken and written communication, but film, cinematography and art. Visual forms of communication such as Broken Spectre can communicate meaning and a narrative depth across many boundaries such as language by using RT to ensure that what they are showing and the sequence it is shown allows for people to see the relevance to each other and draw conclusions from that assumed relevance.

The interpretive nature of RT also allows people to watch and re-watch stories such as broken spectre or any form of communication and gain new depth

and insight each time, particularly if their prior base of information has changed. Watching *Broken Spectre* once for example may update your priors, allowing you to see a wider scope and interpret other forms of communication or indeed *Broken Spectre* a second time with different results. This Bayesian methodology can loop infinitely, as long as the interpreter re-encounters a chosen form of communication with new priors, then the interpretations you take and the reasons you give for the communicator's sense of relevance can change, sometimes drastically. Meaning that the relevance you see once may change and give new or deeper meaning to any form of communication which allows for interpretation. (Bayes, 1763)

Relevance Theory is essential in the interpretation of the mounting number of cues throughout *Broken Spectre*, it allows us to see the overarching story of the film, to interpret the scenes and scenarios as relevant to each other and to the wider narrative. It also allows for further inference of scenes which may seem disjointed, disconnected or irrelevant without the RT. Using RT, you can assume relevance of what is being shown, which means that you can start to process what it means in the context.

### Section III: 'Theory of Mind'

Theory of mind (ToM) can be argued to be a cooperative and communicative ability, akin to the cognitive ability to see colours or recognise music; ToM allows us to 'mentalise' peoples mindsets, giving us the resources to predict and explain not only actions, behaviours and thoughts but also the reasons behind them. (Uta Frith, 2016)

ToM consists of two theories which dominate the understanding, framework and research into Theory of Mind (Forceville, 2014); they are Theory-Theory (TT) and Simulation Theory (ST). Despite these approaches being such a prevalent discussion point in ToM, "Behavioural research has failed to provide clear methods for discriminating between these theories".<sup>8</sup>

Theory-Theory is the idea that our ability to model mind-states of others is built up through theorising and enculturation, and that it is useful for both the understanding and creating of a narrative. It is also useful to inform decisions when other evidence is sparse or non-existent, such as in early stages of a relationship, when there is a smaller base of evidence / base knowledge on the subject.

Simulation Theory is the idea that we speculatively attribute mental states to a target, then 'simulate' the effect of these mental states. It occurs when we see someone behaving in a certain way, we then guess their mental state, and think, 'if I had that mental state what would I be doing?' or simply put when we 'put ourselves in someone else's shoes' (Barlassina & Gordon, 1997). This is a more useful guide during latter or developed stages of a relationship, when we have a lot of evidence of the other parties' mental states and coinciding behaviours.

In humans ToM can also be separated into 'automatic' and 'linguistic' iterations. 'Automatic' ToM occurs in young children as well as other species such as birds; when they know that they have been seen hiding their food, they will later return and re-hide the food. Proving they are aware of and acting upon other's mind-states. 'Linguistic' ToM is likely to be only associated with humans, due to our large and complex language(s) (Uta Frith, 2016). It encompasses thinking about what, when and how (both intonation and specific language) words are said. The film '*Broken Spectre*' lies in the realm of automatic ToM, relying on our natural and inherent processing of what others are thinking, but it also relies on the linguistic element; despite there being very few spoken words, the message and narrative of the story are present enough for methods of analysing and using ToM, usually associated with spoken or written language to be applied.

Tools of coordination or communication such as Theory of Mind, have played a large role in the cooperative abilities of humanity, evolving as early ancestors developed more complex social interactions (Brüne & Brüne-Cohrs, 2006). While they are essential to the evolution of the complex social structures around which our anthropogenic world is built, they are also useful in creating and analysing narrative. ToM allows us to investigate, understand and analyse mental states, empathy, and perspective-taking, and how differences in these can lead to different stressors and priorities to characters or to the narrative. This pragmatic theory can open narratives to interpretation and lead to the ability for compounding and conflicting narratives, rather than more simple coding and decoding.

Mosse uses empathy and perspective taking to further the depth of character understanding and mind reading in his film '*Broken Spectre*' through the effective portrayal of characters and their relationships. Using ToM we can better understand

and see into the minds of the separate characters in the film, in terms of both the characters interactions with each-other, with the Brazilian Amazon and with the overall narrative of complexity driving ecological collapse. While empathy is not inherently linked with ToM (Uta Frith, 2016) ToM can be a useful tool to see where and with whom others are likely to empathise. It also allows the viewer to take another person's perspective, which is a common tool to induce empathy. This use of ToM has allowed Mosse and his film to better communicate the complex intricacies of the internal narratives which make up the film, as well as how these intricacies are resulting in the overall narrative of ecological collapse.

#### **Section IV: 'ToM & RT, Together'**

Bringing RT and ToM together can lead to a better, deeper and more complex understanding of narrative and complex issues such as those posed in 'Broken Spectre'. Combined they further the benefits usually associated with just one tool. For example, mind-reading and false beliefs which are usually accredited to ToM, can use both ToM and RT to further the efficacy of mind-reading and its ability and RT can also be argued to be essential to further false beliefs (Lohmann & Tomasello, 2003). In addition to mind-reading and false beliefs the use of ToM and RT can add to the abilities of inference, perspective taking, mutual knowledge or the construction/ navigation around a shared cognitive network and coherence building (Perner, 1999). These tools all help with better cooperation, as they allow for more effective communication and sharing of information.

Using methods mentioned in the paragraph above as well as the entirety of the essay, I argue that Richard Mosse uses ToM alongside RT to effectively communicate and further the cooperative actions shown in his film, as well as in the making of and viewing of the project. His work and its relatively abstract nature, abnormal storytelling and the availability of ToM applicability to the characters and makers of the film add to the cognitive load of understanding and analysing the film. This in turn, combines with the argument posed by RT that "up to a certain point, increasing the cognitive load associated with a communicative act will engender higher levels of cognitive engagement as listeners attempt to infer the pragmatic relevance of the higher degree of complexity".<sup>9</sup>

Mosse breaks the characters in his film 'Broken Spectre' into distinct sub-stories and categories,

for which he uses both RT and ToM to better accumulate depth and understanding of the characters he has chosen to portray, as well as their mindsets, roles and interactions alongside the wider narrative. The main characters in 'Broken Spectre' are the modern-day 'cowboys', the indigenous people, the natural environment itself and the wider populations in Brazil I would also argue that the makers of the film and the audience viewing the film make up the final two perspectives.

The most dominant sub-story was that of the Cowboys which are cleverly presented to be very obviously and directly related to those in a classic Western. This narrative was chosen by Mosse to help him 'implicate the viewer' as 'The texture of the 'Spaghetti Western' immediately resonates with the viewer, the western viewer anyway, and hopefully it will be overly familiar to us. This is our culture'.<sup>10</sup> This familiar portrayal allows for the audience to take a huge cognitive shortcut, allowing easy access to build upon existing knowledge and stories of Westerns and Cowboys to help generate a mental image of the characters and this sub-narrative. The provision of automatic subliminal information on their outlook, actions and intentions allows the viewer to generate a more complex and intricate mind-reading ability without as much cognitive load. (Carney, Wlodarski & Dunbar, 2014). The viewer can therefore make the cognitive jump to assume that these characters are there to harness and control with the surrounding landscape, to benefit themselves, their families and their people. The interpreter can assume that they are not indigenous to the region, and that they are relatively new incomers who have seen an opportunity of unclaimed land.

The use of RT, in giving us imagery which holds relevance, and by telling us that this is an important addition to the overall narrative alongside allows the viewer to achieve better and more complex ToM with lighter cognitive load. This lighter load in understanding the sub-story along with the inbuilt relevance of the Western sub-story to the ecological destruction allows the viewer to bridge the cognitive gap in viewing these contemporary 'cowboys' as an integral part of the wider narrative. It also allows the cognitive work which links this Western sub-plot to the micro and macro scales which are explored in the film.

#### **Conclusion**

Overall, the tools of cooperation explored in this essay, particularly those of ToM and RT not only added to the narrative but I would argue that

their extensive and integrated use meant they made the narrative. Without the use of these tools the exhibition would have appeared disjointed, following a series of relatively disconnected stories set geographically nearby. Without ToM we would not have understood Mosse's goal of giving broader context and sharing the complexities behind the drivers of deforestation and ecological collapse in the Brazilian Amazon. Without this understanding we would not have given the relevance that we did to the apparently disconnected series of shots in the film, without this inbuilt relevancy we would not have embarked on the additional cognitive work which made these independent sub-plots link to the overall narrative. The skilled use and manipulation of both RT and ToM methods allowed not only the immense cooperative feat making of the film, but also allowed for a furthered and deepened analysis of the film. Finally, the added relevance given to the film by the large audience watching together in a prestigious exhibition space in central London allowed for the cooperative analysis and understanding of the film and its complex narrative.

Entering the film without a previous encounter of a similar production changes the interpreters understanding of the film; meaning that even after seeing the film once, the film would hold continue to hold further relevance, to watch again, or when viewing another narrative on ecological collapse. This Bayesian updating of priors may culminate in the ability for people who viewed the exhibition to view climate communication in a fresh light and alter the way they perceive or present it in the future; meaning that the film and its cooperation with the viewers may result in further change and cooperation in the future. However, the use of a non-normative and nearly linguistically free exhibition set in the renowned 180 The Strand Gallery was a strong way to increase relevance, which resulted in the higher cognitive undertaking from the audiences. This in turn went a long way to better using ToM and other methods to garner a well-considered understanding of the narrative particularly due to the complexity of depicting climate change which 'exists outside of human perception'.<sup>11</sup>

While other collaborations (mentioned above) were prevalent, the main collaborative drivers through ToM and RT were in the cooperation between communicator (Mosse et al.) and the interpreter (audience). The cooperative efforts potentially could have gone further, using ToM and RT to inspire more change in daily activities, collaboration of the

audience members with each other or with Mosse in his next project could all have been achieved through the use of these cognitive tools. There is also the argument that ToM is not or is less present in people with autism, (Uta Frith, 2016) or is damaged, missing or less functional in people with a variety of mental illnesses, this may make the films reliance on the method appear more disjointed and result in less understanding of the issues, making them seem random and totalitarian, rather than intricate and interconnected.

Overall, through the ingrained and effective use of RT, Context & ToM Mosse successfully forces the immediacy of ecological devastation on the audience through the unconventional presentation.

## Quotes

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