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Film review: *Inception*

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Are you in control of your own mind? Are you currently awake or dreaming? Does the narrative of perceived reality necessarily follow a linear, sequential path? To what extent do other people play roles in our perceived realities distinct from the environments in which we exist and interact? How deeply can we manipulate the mind of another person? What ethical issues does such manipulation raise? These questions, which have both deep philosophical and urgent practical significance, are all raised by the recent film *Inception* (dir. Christopher Nolan, 2010). In this review, we develop these questions both as they appear in the film and as relate to the world we perceive as being real. *Inception* is a very dense film, raising more major ideas than we can discuss here. For example, we do not discuss the resilience of ideas within our minds or the power of the subconscious; the latter topic is among those covered in a separate review (Rinesi 2010). In our review, we will give away much of the plot (so please be warned), but also offer topics for consideration that deepen the viewing experience.

Inception's plot revolves around a technology that permits groups of people to undergo shared dreaming experiences. At least some participants in the dream worlds can perform sophisticated, intentional actions, including the following of plans developed pre-dream. Using this technology, a high-level underground business has developed to extract valuable information from target individuals. "Extraction," the removal of information, is explicitly contrasted with "inception," in which an idea is inserted into the target's mind during shared dreaming. Inception, meant to alter the target's waking behavior, is presented as a risky, cutting-edge technique; challenges include getting the idea to stick as well as inserting it in such a way as to appear to the target to be internal in origin. Overcoming these challenges requires the perpetrators – shared dream participants – to become deeply embedded within the target's psyche.

The film's plot involves an effort to perform inception. The target is the heir of a multinational energy corporation; the team performing the inception is hired by the head of a competitor who can no longer effectively compete. The competitor, Mr. Saito, wants the heir to break up the company he inherits. The team itself has a quirky composition customized for the inception task: a thief, a background researcher, a forger, a chemist, an architect, and the industrialist. The thief (Cobb) is the team leader, an experienced dream leader who refers to himself as the best extractor in the world and is also the only one with former inception experience. The background researcher is tasked with understanding the target. The forger,

beyond simple document forgery, can skillfully fake the identities of people with whom the target is even intimately familiar. The chemist develops serums suitable for regulating the shared dream process – and the waking from it. The architect designs the built world in which the dream takes place. Finally, the industrialist is the head of the competitor corporation; he insists on participating to confirm that the job has been done. In order to successfully perform the inception, the team must execute a challenging series of deceptions. To achieve this, the team layers dreams within dreams. A total of three layers are planned, each deeper in the psyche than the previous; a fourth layer is improvised when the plan meets glitches.

The hierarchical structure of dreams within dreams raises the profound philosophical question: how do you know when you're dreaming and when you're awake? For the film's target, and even occasionally for team members (and also the audience), it is hard to tell the difference between dream and reality. After all, the target has to be convinced he is in a dream (which is itself within another dream). Furthermore, the film contains some ambiguity regarding what, if any level, was reality. The top level of the dream-within-dream hierarchy is presented to the viewer as reality, but, similar to the classic film *Dreamscape* (dir. Joseph Ruben, 1984), there is reason to suspect that even this top level is a dream. The film remains ambiguous on this matter, and appropriately so, as this ambiguity highlights the ambiguity we must face within our own lives about what actually is real.

The ambiguity about whether our perceived realities are indeed real is a topic of ongoing debate within the philosophy literatures on epistemology and philosophy of mind. A classic thought experiment in this realm is the brain in a vat (Brueckner 2006; Putnam 1981). Here we imagine a human brain placed in a vat of liquids containing all the nutrients necessary for the brain to survive and function. The vat also contains connections for sensory input to and information extraction from the brain. The connections are run through a computer which processes the brain's thoughts and returns sensory input corresponding to a highly plausible perception of reality – so plausible that it would be indistinguishable from the reality we perceive. The question here is, how do we know we are not brains in vats? A similar thought experiment is the simulation argument (Bostrom 2003). Here, a powerful computer simulation contains simulated minds with all the complexity of our own. In parallel with the brain-in-vat thought experiment, the question here is, how do we not know we are a simulation within a computer program? The simple answer is that we don't know, and cannot know. While this idea is more fully explored in the movie *The Matrix* (dir. Larry and Andy Wachowski, 1999), *Inception* raises the idea that if dreams can be that powerful – and that manipulable – then we may not be able to know whether or not we are in one.

The hierarchical structure of dreams within dreams also points to another intriguing theme within the film: recursion. A sequence of dreams within dreams is itself a recursive phenomenon, but it is not the only one in the film. Within dreams, recursive time sequences can appear through the incorporation of memories into dream scenes. These time loops, the only non-linear movement through time in the film, are considered dangerous. For this reason, architects are instructed to keep real places out of dreams so as to avoid triggering memories in dream participants and particular targets. Likewise, time within the film progresses in the usual linear fashion. The sole exception is in the character of the thief, who has select memories of his troubled past that reoccur throughout the film's many dream worlds. These memories are moments the thief wishes to "change," and their reoccurrence develops a strong subplot within the film while also posing substantial logistical problems to the inception team.

Recursion in the film also exists across space. The dream worlds are typically designed by the architect to include loops, so as to limit the extent of the design task, somewhat reminiscent of the island bubble of *The Truman Show* (dir. Peter Weir, 1998). Indeed, a new recruit, the eventual architect, is initially tested with the following intriguing task: In two minutes, draw a maze that takes one minute to solve. (More on the dream world design below.) Dream worlds can even include infinite staircase loops as popularized by M.C. Escher sketches and other paradoxes. One such staircase is used strategically in an action sequence in the film. The film even includes a dream world scene with two mirrors facing each other, displaying a

recursive sequence of reflections of the people standing between the mirrors. This infinite recursive loop is then shattered by one of the people between the mirrors – the architect – and as she does so, the dreamers' world becomes that of the previous reflection.

The mirror scene closes with a quite different moment of intellectual significance. After peering into the infinite recursion of reflections, the architect walks up to one of the mirrors and touches her reflection. This causes the mirror to shatter, with the space behind it becoming her world, which she then steps into. This moment suggests a striking commentary on the "mirror stage" developed by French psychoanalyst Jacques Lacan (c.f. Lacan 1953). The Lacanian mirror stage is the moment in a child's life when the child first recognizes her mirror reflection as being herself. This marks an historic moment of Ego formation for human beings. The Ego here is the part of the mind that negotiates between what the individual wants to be for herself and what the individual perceives that society wants her to be. Likewise, the individual recognizing her mirror reflection experiences both her internal cognitive self and her external visual self as it is seen by others (see also Pronin 2008). Thus, for the architect to shatter the mirror and step into her reflection world is, from this Lacanian perspective, a fusion of the self as perceived by itself and the self as perceived by others – a fully negotiated Ego. That this momentous event occurs within the space of a dream (on which see Fink 1995, 189) suggests the possibility, within the realm of the dream, of escaping the psychological shackles constructed by our waking minds. That such a brief moment in the film holds such profound significance speaks of *Inception*'s immense intellectual density.

Another noteworthy line of thought suggested by the film is in the relationship between humans and the environment. The environment here refers to the spaces in which we live, which are not necessarily full of plants, nonhuman animals, and other "nature" (as in the term "environmentalism"). The film presents an interesting dichotomy between the built environment of the dream world and those who inhabit it. The world's built environment is designed entirely a priori by the architect and is presumably uploaded to the dream participants' minds via the shared dream technology (which, in the film, is contained within a suitcase in the world one layer closer to the awakened world). In contrast, people within the dream worlds (other than the participants) must be constructed by the mind of the target individual. Presumably this is because the built environment is not an intimate part of our dreamed experience, whereas other people are – even random bystander pedestrians. This raises a curious dichotomy between people in the environment. Why is it that the built environment plays such a starkly different role in our dreams from that of people, even people who are strangers?

This dichotomy is reminiscent of the human/environment dichotomy widespread throughout a long tradition of Western thought. For example, Aristotle (350 BC, Book 1, Chapter 8) wrote, "Plants exist for the sake of animals, and brute beasts for the sake of man"; similarly, Genesis 1:26 reads "Let us make man in our image, after our likeness: and let them have dominion over the fish of the sea, and over the fowl of the air, and over the cattle, and over all the earth, and over every creeping thing that creepeth upon the earth" (quoted from Johansson-Stenman 2006, 4). The dichotomy is not, however, a universal human construct – other cognitive traditions lack the human/environment dichotomy. In much Eastern thought, for example, humans are intimately connected to the natural environment; no dichotomy exists. Similar relationships are found in Native American thought and in at least some modern science, which situates humanity as within the animal kingdom by evolution and within Earth ecosystems by circumstance (Bang et al. 2007). This raises the question: would someone from a different cognitive tradition require the same handling of people and built environments in the shared dream world?

The topics found in *Inception* are not only of intellectual interest – they also raise profound ethical issues. Inception is shown to have powerful, life changing effects. For example, to get the energy corporation heir to break up his company, the team digs deep into the target's relationship with his father. The team's approach is to subtly reinvent this relationship in the target's mind, so that the target no longer aspires to be like the father. The team thus faces the power to manipulate the identity of another person strongly and

covertly. How should this power be wielded? Is such manipulation a harm to the person manipulated? What if the manipulation improves the person's life? What if the consequences of manipulation to broader society are quite good? If we ever obtain such capability for manipulation, these questions will need to be answered.

While the technologies requisite for shared dreams, extraction, and inception may or may not be possible, similar technologies already exist or are in active development. A real-world (or so we think) parallel to extraction is the so-called truth serum used at least occasionally in the interrogation of hostile detainees. Truth serum is believed to have been used, for example, by Indian authorities upon the capture of one of the ten Pakistani men who waged a terrorist attack on Mumbai in 2008 (Borrell 2008). While we are not aware of any direct parallels to inception, we would be surprised if there are no efforts being made to acquire such a capacity.

The real-world motivation for acquiring extraction and inception capabilities closely parallels the motivation in the film: power. The development of the underlying shared dream technology was sponsored by a military, for the strategic advantages in training it offered. Similarly, real-world militaries support the development of a broad range of cognitive technologies, including extraction-like truth serums, cognition-enhancing pharmaceuticals (Caldwell et al. 2004), autonomous robotic drones (Lin et al. 2008), and even brain-machine interfaces (Hoag 2003). For better or worse, the profound ethical issues raised by the possibility of cognitive manipulation illustrated in *Inception* are of urgent practical significance.

Inception thus raises a remarkably broad range of issues. Indeed, the film is extremely dense in both intellectual content and plot structure. It also includes ongoing militarized fight scenes, resulting from protection mechanisms built into the target's subconscious. In our opinion, the fight scenes are a poor excuse for injecting eye candy into the film and a distraction from its narrative development. Even without them, the film has a highly dense plot structure, a strong ensemble cast, and a web of deep ideas, like a heist film with a point. The militarization struck us as a cheap gimmick to appeal to a broader audience, and was incongruous with the core of the film. That said, the film overall is quite enjoyable, and worth watching with the ideas discussed here in mind.

References

Aristotle. 350 BC. *Politics*.

Bang, M., D. L. Medin, and S. Atran. 2007. Cultural mosaics and mental models of nature. *Proceedings of the National Academy of Sciences* 104(35): 13868-13874.

Borrell, B. 2008. What is truth serum? *Scientific American* (4 December). http://www.scientificamerican.com/article.cfm?id=what-is-truth-serum (accessed 11 August 2010).

Bostrom, N. 2003. Are you living in a computer simulation? *Philosophical Quarterly* 53(211): 243-255.

Brueckner, A. L. 2006. Johnsen on brains in vats. *Philosophical Studies* 129(3): 435-440.

Caldwell, J., L. Caldwell, J. Smith, L. Alvarado, T. Heintz, J. Mylar, and D. Brown. 2004. *The efficacy of modafinil for sustaining alertness and simulator flight performance in F-117 pilots during 37 hours of continuous wakefulness*. United States Air Force Research Laboratory Report AFRL-HE-BR-TR-2004-0003. http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA420330&Location=U2&doc=GetTRDoc.pdf (accessed 11 August 2010).

Fink, B. 1995. *The Lacanian subject: Between language and jouissance*. Princeton: Princeton University Press.

Hoag, H. 2003. Remote control. *Nature* 423: 796-798.

Johansson-Stenman, O. 2006. Should animal welfare count? *Working papers in Economics*, no. 197, Department of Economics, Göteborg University. http://gupea.ub.gu.se/bitstream/2077/2725/1/gunwpe0197update.pdf (accessed 11 August 2010).

Lacan, J. 1951. Some reflections on the ego. *International Journal of Psychology* 34: 11-17.

Lin, P., G. Bekey, and K. Abney. 2008. *Autonomous military robotics: Risk, ethics, and design*. Report prepared for the US Department of Navy, Office of Naval Research. http://ethics.calpoly.edu/ONR_report.pdf (accessed 11 August 2010).

Pronin, E. 2008. How we see ourselves and how we see others. *Science* 320: 1177-1180.

Putnam, H. 1981. *Reason, truth, and history*. Cambridge, UK: Cambridge University Press.

Rinesi, M. 2010. Film review: *Inception*. *Journal of Evolution and Technology* 21(1): 60-61.