

# Sequences, Dreams and Cinema

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## Bridge of Dreams

In an average lifespan, we will dream for six years. That works out at two hours a night. Jaak Panksepp, in *Affective Neuroscience*, sounded a little in awe when he wrote, ‘What a strange thing, this dreaming process, that has now been the focus of more scientific inquiry than any other intrinsic mechanism of the brain.’<sup>1</sup> He went on to suggest that the ‘REM state was the original form of waking consciousness in early brain evolution, when emotionality was more important than reason in the competition for resources.’<sup>2</sup> After he proposed his ‘new theory of dreaming’, Panksepp tossed it on the pile with all the other theories. Perhaps it was the source of his restrained sense of awe that something so universal, so familiar, has generated so many explanations and so little to hold on to. It’s almost like a recurring dream.

Mammals, birds, even bearded dragons, dream. Their experience of REM sleep looks like ours on an EEG machine. Recent studies show REM sleep is closely linked with memory and learning. Deep sleep (Slow Wave Sleep) replays the previous day’s events. REM sleep, however, is more involved with considerations of future planning.

REM sleep particularly influences the processing of ‘procedural-implicit’ memory and also of memories acquired under emotionally charged conditions.<sup>3</sup> If we are prevented from completing a sequence of REM sleep, if given the opportunity the following night, we will make up

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<sup>1</sup> Jaak Panksepp, *Affective Neuroscience: The Foundations of Human and Animal Emotions* (New York: Oxford University Press, 1998), p.128.

<sup>2</sup> Ibid.

<sup>3</sup> P. Maquet, J.M. Péters, J. Aerts, G. Delfiore, C. Degueldre, A. Luxen and G. Franck, ‘Functional Neuroanatomy of Human Rapid-Eye-Movement Sleep and Dreaming,’ *Nature*, Vol. 383, 12 Sept. (1996), 164.

for the lost time. However, many studies have shown that the loss of REM sleep does not necessarily adversely affect behaviour, except for a tendency to impair the learning of complex tasks. It is thought, therefore, that REM sleep is an essential part of learning, involving memory and play. The evidence is strong that we dream by necessity to aid in learning new skills and accommodating new experiences. In fact, we tend to enter into REM sleep and dream for longer periods when we have been exposed to stress or unfamiliar situations.<sup>4</sup> Dreaming occurs in sequences containing four phases, through a cycle of 90-120 minutes. Each sequence is repeated four or five times during a night's sleep. Each phase within the sequence is identified by its signature brainwave configuration. Phases Two and Three are slow wave, theta and beta waves. REM sleep, the vivid dreaming phase, produces alpha waves, almost the same wavelength as waking. The phases, although recurring in the same order in a particular cycle, change in their duration, with REM sleep increasing in duration with each sequence. By the last sequence, REM sleep can take up to two thirds of the 90 minute cycle. What are we to make of the undoubted build in tension of dreaming, the increasing length of duration and the accompanying increase in brain wave frequency? What are we to think about this lengthening of each successive sequence of REM sleep as a night's dreaming progresses? We know that REM sleep accompanies a strengthening of memory and assists learning new tasks. However, we also know that some dreams, particularly those in Phase Two, can be terrifying and recurring.

Most of us have experienced profound changes in our attitudes after we've gone through a catharsis such as a death in the family, or a bout of life-threatening sickness, or a divorce. These changes, over many months, occur without our conscious thought. It is as though we are going through some form of emotional healing while we sleep. How else can we explain that calming sense of deep relief, or acceptance, after many months of grief? To say that time heals doesn't do justice to the process. Such a sentiment isn't very informative. Perhaps it's the action of dreams over time, running various scenes from memory back and forth like a piece of film on a Moviola editing machine, or a Steenbeck, that assists our emotional healing. Mark Blechner in *The Dream Frontier*<sup>5</sup> describes a process he calls Oneiric Darwinism, where REM sleep takes place as a sequence of dream episodes, each offering up selected scenarios to palliate

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<sup>4</sup> W. Fishbein, *Sleep, Dreams, and Memory: Advances in Sleep Research* (New York: Aperture, 1980).

<sup>5</sup> Mark Blechner, *The Dream Frontier* (New Jersey: The Analytic Press, 2001), p.77.

our social anxiety. Similarly, Richard Coutts proposes a theory where a given sequence of REM sleep eventually produces a selected schema which encourages social and personal wellbeing.<sup>6</sup> While we sleep, we're accessing memories, rocking and rolling over scenes, picking over and shaping feelings that advantage our wellbeing by offering a path to acceptance, mitigating our sense of grief. It is as though we have taken the original footage of our memories and added music and a new ending to help us through the shock and pain of loss.

The filmic allusion applies to dreams in several ways. Cinema, like dreaming, is substantially composed of image and emotion. Perhaps it's no coincidence that the dreams cycle lasts for 90 minutes and so does a feature film. Each cycle is made of up three or four major phases or acts, akin to acts in a feature narrative. Similarly, the experience of dreaming and film is broken up by decisions, which mark the end of each act. Narratives run through many dreams, narratives comprised of emotion and image. Is it any wonder that we so quickly 'understood' cinema without needing to learn the language?

Before we look more closely at the possible connections between dreams and cinema, it would be worthwhile to discuss narrative, since it figures prominently in both.

### **Narrative—Rehearsing Life**

An engaging narrative suspends time, when the act of imagining the story takes us away from the immediate present. Yet, the experience of the narrative depends very much on the form in which it is offered to us. Reading a novel is obviously very different from the experience of watching a play or a film. John Steinbeck's *Of Mice And Men* first appeared as a novel in 1937, within a year it became a very successful play and in 1939 a critically acclaimed film, a box office hit nominated for four Oscars. The characters, setting, theme and dialogue are very similar in each 'version', yet there is a progression toward visual 'fixing' from novel to theatre to cinema. In the novel we are free to imagine what the lead characters, George and Lenny, look like and the world in which their tragedy unfolds. With each of *Of Mice And Men's* successive theatre

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<sup>6</sup> Richard Coutts, 'Dreams as Modifiers and Tests of Mental Schemas: An Emotional Selection Hypothesis,' *Psychological Reports*, 102 (2008), 561-574.

productions the characters and set reference the original stage play. However, the cinema freezes the film actors Burgess Meredith and Lon Chaney Jr. forever in images and sound. If you have seen the film before reading the novel, it may well be impossible to ignore referring to the film cast in your imaginative construction of the narrative.

This fixed nature of film is an important part of the narrative experience. Every image we see in a film has been chosen for us, in the same way that we seem to have no control over the images in a dream. Yet, we feel some unique sense of intangible connection. From the earliest days of cinema, references to film remarked upon its ability to approximate the experience of dreaming. This may have been due to a night at the movies inducing a certain ‘starry-eyed tranquillity’, but I would suggest it is due more to the critical role dreaming plays in our wellbeing. We know that dreams overwhelmingly are concerned with, or spring from, the same source—*anxiety*.<sup>7</sup> The alleviation of that anxiety occurs through narrative’s revelations by way of transition, decision and action, and cinema’s use of narrative taps into the dream experience with a potency other creative forms can rarely match.

We know that Aristotle’s construction of the narrative, where pity and fear conspire to find their way to a catharsis, is the bedrock of drama. Perhaps it’s my too literal interpretation, but I suspect that fear isn’t the precise state of the audience. It’s anxiety. Fear arises from a real, perceived threat, but anxiety is a manifestation of some unrealised danger; that feeling of unease about the possibility of a bad outcome in the future is a constant human companion. Without it, we’re happy. However, anxiety delivers a strong desire to prepare for untoward events, to act, and that requires a decision.

## Decision Making

Consciousness is made up of discrete moments of decision—a decision is a step, an interval, an instant of locating a point in our own mental time when a consciousness affirms should a particular set of circumstances arise I will perform this response—it is a way of saying, ‘I will recognise this state, and when it occurs I will act in a specific way.’ A

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<sup>7</sup> C. Hall, R. Van de Castle, *The Content Analysis of Dreams* (New York: Appleton-Century-Crofts, 1966).

decision is the moment of awareness that predicates action. An action isn't caused by a stimulus—it is caused by or comes of a decision.

That chain of discrete moments—from stimulus to decision to action—often defines the quality of any life. One of the markers of consciousness is to be aware of that moment that predicates action—to sense or experience the making of a decision.

In *The Art of Dramatic Writing*, Lajos Egri asserts:

There is no beginning and no end. Everything in nature goes on and on. And so, in a play, the opening is not the beginning of a conflict, but the culmination of one. A decision was made, and the character experienced an inner climax. He acts upon his decision, starting a conflict which rises, changing as it goes, becoming a crisis and a climax.

I accept the process Egri describes and agree that narrative is grounded in nature, however the later claim that 'since there is no jump in nature there cannot be one on the stage either'<sup>8</sup> is difficult to swallow. We know, in fact, nature is replete with jumps, quantum leaps and boiling points. Electrons don't jump to the next shell without a precise amount of energy. Light looks to be made up of waves, but the waves are made of photons. The Buddhist abbot, Venerable Ajahn Brahm, wrote that during meditation he has deduced that consciousness is like a stretch of sand on a beach:

Superficially, the sand looks continuous... but after you investigate it closely, you discover that it is made up of discrete, isolated particles... contemplating consciousness in this way—seeing it as a series of discrete, isolated events, undermines the illusion that there is a knower, constantly present, which is always there to receive the experience of the world.<sup>9</sup>

Despite his belief that there is 'no jump in nature', Egri seems to accept that narratives do progress through turning points or decisions, when he

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<sup>8</sup> Lajos Egri, *The Art of Dramatic Writing: Its Basis in the Creative Interpretations of Human Motives* (New York: Simon & Schuster, 1946), p.228.

<sup>9</sup> Ajahn Brahm, *Mindfulness, Bliss and Beyond* (Boston: Wisdom Publications, 2009), p.114.

describes a crisis as ‘a state of things in which a decisive change one way or the other is impending.’<sup>10</sup>

We know the core of every narrative is conflict, with the expectation of catharsis and resolution. The story elements that drive the narrative—transition, decision and action—also inform us about the workings of the human mind. Consciousness, weighing, feeling, gathering, making decisions, is the means by which the mind holds up a mirror to itself. Our days are assembled from thousands of small decisions. Brains are composed of multiple, competing networks, each of which has its own goals and desires. We are complex creatures because we are composed of many drives, all of which want to be in control.<sup>11</sup>

When we humans, so keen to survive the vicissitudes of life, run from danger it is emotion that cracks the whip behind us. Then, our cognitive processes catch up, they arise from internal conflict and they aren’t always instant. It’s a system in the brain that makes a decision, which goes on to influence other systems. The process of cognitive thought sets up a debate, questioning the emotions and setting in train a transition to decision, without which there would be no action. Our minds have a tendency to crush ambiguity into choices. Who we are emerges from the competition to dominate that runs in our brains every moment of our life. When the emotion systems are shut down no choice is tangibly different from another and we struggle to settle an issue or reach a conclusion. Without emotion no decisions can be made, no actions can be executed—every day is trapped in stasis.<sup>12</sup>

A narrative approximates the dream experience—since dreamers do not think or at least they’re not aware of it. They are not aware of making decisions to act. The process of placing emotionally charged images into a specific order is akin to constructing a narrative—to what end? Perhaps to come up with a series of events, connected through causality to enhance our survival and wellbeing. The imperative is that dreams are driven by something and that imperative is anxiety. Not the nail-biting sort, but anxiety as a constant pressure to assess the future for trouble or failure—a means by which we can test possible outcomes and rehearse responses.

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<sup>10</sup> Egri, op. cit. p.224.

<sup>11</sup> M. Daniel Wegner, *The Illusion of Conscious Will*, (Cambridge, Mass. and London: MIT Press, 2002).

<sup>12</sup> Antonio Damasio, *The Feeling of What Happens* (New York: Harcourt and Brace, 2000).

Recent studies indicate that dreaming has some part in ‘deciding’ how we should act or modify our actions to assist our social survival or wellbeing.

Panksepp’s theory that the dreaming state could be a ‘proto form’ of consciousness suggests memories of early childhood where stimulus and arousal play like zephyrs across the mind. It is the state of the wandering mind where decisions drift by and dreams keep trying to make order of the world from the back room. The impression one has of the phenomena of dreaming is that no decisions are being made to act: things just happen and you are there, and these things are happening to you. You believe this because you are profoundly aware of emotional responses to the events you are involved in. This is akin to the experience of hypnosis, where one is aware of the events and the surroundings, but unaware of the decision-making process. As Dylan put it, ‘*Something is happening and you don’t what it is, do you, Mr. Jones?*’ Perhaps in this state, all stories are products of the unconscious, answers to questions we have yet to ask.

If David Hume is right and causality is an illusion, then the making of a narrative would be a stubborn process of defying logic, albeit a necessary one. Decisions arising from dreams and narratives would seem to be grounded in the testing of various causal combinations. This implies we’re looking for a particular answer, some discrete decision we can apply to the future. Daniel Wegner relates this to the human need for agency and identity:

The intuitive appeal of the idea of conscious will can be traced in part to the embedding of the experience of will, and of the notion that will has a force, in the larger conception of causal agency. People appear to be goal-seeking agents who have the special ability to envision their goals consciously in advance of action. The experience of conscious will feels like being a causal agent.<sup>13</sup>

In cinema, I suggest we have found a means of projecting our anxiety into a narrative through a state which approximates dreaming while retaining the authority to make decisions and direct our attention. It feels like second nature.

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<sup>13</sup> Wegner, op. cit. p.20

## Cinema—Mechanical Illusion

The Lumiere Brothers were technicians, camera makers. They were not artists in the usual sense. In 1894 they bought the patent to a machine that could shoot and project film, invented and made by Léon Bouly. In 1895, they patented their improved *cinématographe*, a wooden box with a lens at one end and a handle on the side. Once it was loaded with film, they closed it tight, pointed it at the female workers draining out of their father's factory and turned the handle. Cinema was born.

Audiences soon accepted the mechanical chatter and uncertain nature of the moving image. From turning wheels and hot lamps faces and actions gradually took on greater sophistication in the leap from industrial light to a dependable magic.

The technology of cinema was unique and stringent. Unless all the settings were rigorously adhered to the results were disastrous. The box had to be perfectly sealed. The handle had to be turned at the right speed to allow the film to travel through the gate at between 17 to 20 frames per second. The lens had to be clean, the gate had to be clear of debris. Any tiny scratches in the emulsion would render themselves as gigantic cracks on projection. This application of precise technology to make art, or at least an entertaining diversion, had to be mercilessly sustained. Light meters, lens caps, sealed containers and absolute cleanliness were the way to defeat Murphy's Law.

The materials for making films bred many variations in film stock and camera construction. However, Edison's association with Eastman Kodak established 35mm as the gauge for the burgeoning film industry, and he established that 46 frames per second was optimal for viewing the moving image. Once these matters were settled, the issue for filmmakers and audiences alike was the duration of a film shot and projection. Joining film was a very tricky business. Film stock was extremely flammable and it could only be joined by cementing pieces together in a darkroom. Over the first decade of film production, Eastman Kodak settled on 35mm stock lengths of 200ft with a running time of just over two minutes. By 1909, Kodak and Blair in Europe had standardised 35mm film stock in 400ft lengths, then 1000ft lengths. Handcranked cameras were operated at between 20 and 26 frames per second. With 35mm stock there are 16 frames per foot, giving a running time of a little over ten minutes, or 11.111111minutes to be exact. This became the standard duration for



hundreds of films before the film splicers. Films were simply edited in the camera. Continuity screenplays blocked out every scene, with every shot, and then were filmed in sequence. Ten minutes became second nature to filmmakers.

Technology has had an enormous influence on the development of narrative in film. Edison's film production company, the result more of his entrepreneurial genius than individual invention, finally got into theatre projection by the turn of the century and cinema began to standardise film stock, frame speed and running time. The very size of the canister which held the film stock limited a roll of film to 1000ft, or ten minutes of running time. By 1905, the Cinema of Attraction was on its way out and the narrative one reeler had become the standard fare for film-goers.

The first feature film, made in Australia in 1906, had to be screened in ten minute segments, with an interval of several minutes while the reels were changed over. Nordisk, in Denmark, devised a system of synchronising two projectors such that a small white dot in the top right of the frame would indicate the transfer from one projector to another, allowing for films to run endlessly. Despite all these obstacles, by 1912, feature films were being made around the world with duration times over 40 minutes.

The advent of sound in 1926 finally brought an end to the cavalier attitude of projectionists when it came to screening films outside a very strict number of frames per second. Any variations in speed and the sound would suffer. Sound, although delivered in an analogue strip down the edge of the film, forced the standardisation of the film frame rate at 24 fps. It also improved the image because projectors using twin or triple blade shutters could multiply numbers of frames per second and so remove the jerky motion that so plagued many early silent films.

For the next twenty years, film dominated all other creative endeavours in its ability to travel to every culture at an affordable cost and with a means of appealing to all ages. In a little over fifty years, film had pushed aside every other form of narrative. 90 minutes in the dark was an experience practically everyone on earth was familiar with. Dreaming and cinema. Why was this length deemed satisfactory? It is worth noting that the entire sleep cycle takes 90 to 120minutes, the duration of a feature film.

The Czech filmmaker and theorist Frank Daniel spent many years teaching his sequence paradigm to screenwriters. From the early days of cinema, films were despatched to exhibitors on 1000ft rolls, each with a screening time of around ten minutes. A feature film would comprise eight or nine reels. This meant that in a one projector theatre the audience would have to endure a sequence of at least seven small intervals while the projectionist changed reels. As a consequence, production companies insisted that screenwriters include a dramatic break at the end of each reel to keep the audience hanging on. In the 1950s, Daniel used this structure, a sequence of eight or nine 10 minute segments, to teach screenwriting to his students in Prague. In his book *The Path To Film Drama* (1956), Daniel recognised that this sequence, lasting 90 minutes, had become engrained in the audience's appreciation of the cinema narrative.

### **Dreaming While Awake**

The powerful association between the visual language and emotion of cinema and that of dreaming often produces the erroneous notion that cinema is akin to watching a dream. I would argue that the kinship between the two is much more complex. It is true, cinema progresses a narrative in discrete elements of image and emotion that has a strong correlation with REM sleep and that process is understood by us because it is something we experience every night of our lives. However, the sequences of transition or information-gathering, leading to decision, in a film narrative are followed by intervals to integrate the information and allow for its projection into possible outcomes. We replay these imaginary outcomes, running over the salient details, refining their influence, divining their meaning. In a dream these ruminations occur beneath our consciousness. We awake to discover a destination with scant memory of the journey. In a film we travel the journey, and we remember it.

In a dream, the intent and function of the narrative journey is second nature, but it is 'controlled' by another system in our brain. Sequences of narrative, free of restraint, with strange and unlikely associations, are played out in our dreams, followed by an interval of rest. The next sequence takes a parcel from the previous sequence, Coutts calls it a 'schema', and uses it as the seed for the next sequence. This process emulates the process of experiencing a narrative; gathering information until the moment of decision, then allowing it to settle before gathering again to the next moment of decision, and so building to the climax, the

ultimate delivery of some fundamental truth or realisation, a mark of enlightenment.

In dreams, we are often searching for relief from a vexing problem or emotional unease. Jaak Panksepp suggests that dreaming may well provide 'an endless variety of ideas, especially when life is stressful and we need to entertain new alternatives.' He goes on to say that, 'dreaming sleep goes up when organisms are confronted by stressful, emotionally challenging situations.'<sup>14</sup> We know dreams can possess a narrative logic. The feeling of causality, unfolding in streams of sequences, suggests some form of exposition. Dreamers often recount complex, interlocking progressions of action and response in chases, climaxes and scenarios that powerfully convey a series of events resembling a narrative. Freud reported extensively that most dreamers have a very strong sense of the events in their oneiric travels involving them. They are present to observe and register an affective response. Often they feel almost passive in their presence at the scene, impotent to act, but these events are happening to them.

There is another aspect of dreams that strongly suggests they exhibit the structure and intent of narrative. On those occasions when the 'outside world' breaks through the thick folds of sleep, it is often sifted into the dreamer's experience. Not only is the source of the stimulus explained, it is given a role in the story. It is wrapped within the cloak of causality, legitimised with narrative logic. This is not the experience we have as members of a cinema audience, engaged with a narrative. We are awake, engaged in 'reverie or interior monologue'. Through this 'conscious fantasy' we watch characters in the narrative make decisions. Since we also possess the illusion of conscious will, we are constantly comparing the decisions made by the characters with the decisions we imagine we would make given the same circumstances. Sometimes, we concur with a given character's decision, aligning ourselves with them, bonding with them. At other times, we disagree, perhaps even taking vicarious pleasure in their discomfit or demise. Still at other times we sit and watch a character blown about like a leaf in the wind and realise that is us as well, knocked and pushed around by the forces of nature, fate and destiny. The critical aspect is that everything we see and hear is presented to us, we cannot choose what we will see, yet, we are able to direct our attention and make

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<sup>14</sup> Panksepp, *op. cit.* p.128

decisions. This state obviously cannot be a dream, but it has the quality of a dream.<sup>15</sup>

In a film, the duration of each narrative sequence, the build in dramatic tension toward an outcome or revelation, is constant and we are aware of it. Obviously, the nature of the cinema narrative experience departs from dreaming in a critical way. We are not dreaming, but we are not completely awake. Jerome L. Singer would say we are daydreaming. The phenomenon is one we are all familiar with. Singer would claim it takes place when ‘the emergent awareness of one’s own spontaneous inner activity produces a feedback effect which can generate a new pattern of action, affect, or fantasy.’<sup>16</sup> He has suggested the primary content of daydreaming is ‘reflecting attempts at exploring the future’, as Freud suggested, through ‘trial actions’ or through ‘positing a variety of alternatives not specifically involving satisfactory outcomes’.<sup>17</sup> We are familiar with the feeling of will, of possessing causal agency, described by Daniel Wegner in *The Illusion of Conscious Will*. When we daydream, we retain that feeling of will, although he we are not fully alert to our surroundings.

The technological sophistication of film has obvious parallels with dreaming, such as sequencing, primary and secondary processing and duration. The 90 minutes sleep cycle is equivalent to a feature film, which in turn is made up of a number of sequences. Daydreaming involves pictures, ‘visual imagery is the predominant modality for fantasy’, and so it is for film, obviously. It involves anxiety, and is ‘strongly orientated towards future interpersonal behaviour’.<sup>18</sup> We enter into that state to dissolve or relieve anxiety because it is a problem dealing with the emotions. We rehearse our decisions and actions in order to dissipate the threat that being unprepared will impair our ability to respond appropriately. In other words, the process is an introspective form of learning.

While the nature of film, comprising shots, scenes and sequences, mimics the structure of REM sleep, the spectator’s passive daydreaming

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<sup>15</sup> Branson Stowell, *Cinema And The Unconscious: Filmic Representations of Dreams* (University of Colorado, Boulder 2015).

<sup>16</sup> Jerome S. Singer, *Daydreaming: An Introduction to the Experimental Study of Inner Experience* (New York: Random House, 1966) p.34.

<sup>17</sup> Ibid. p.58.

<sup>18</sup> Singer, op.cit.

state could well be the portal we use to experience narrative in cinema and in this way diminish our anxiety by rehearsing for life. Daydreaming, or wandering mind, would seem to be an essential activity for human beings. It involves play and problem solving. It can occur at any time, but is often a prelude to sleep. It is known to seed REM sleep with ideas, affects and images. It allows us to explore the store of memories and images, proposing scenarios and outcomes. Since daydreaming involves 'trial actions' it seems reasonable to suggest that engaging with a narrative in a film could be a natural outcome for the theatre-going daydreamer.

Jerome L. Singer in *Daydreaming and Fantasy* describes daydreaming as 'the unrolling of a sequence of events, memories or creatively constructed images of future events which have varying degrees of probability of taking place.'<sup>19</sup> Such a definition would also adequately describe the state of those who create narratives. The creation of 'trial actions' is very the much the province of the storyteller. Slipping into a reverie, in a communion with the imaginary construct of a narrative, is the avowed territory of writers and children. In order to make a connection with the audience the bridge begins and ends in conscious fantasy.

In *Poetics*, Aristotle wrote: 'Most important of all is the structure of the incidents, not of man, but of action and life.' Why the great philosopher should push character off stage to make way for action is a mystery. Perhaps he felt that temperament was of little consequence against fate. Our longing to understand the minds of others, including our own, will always concern us much more than actions alone. Perhaps to fully comprehend the workings of another's mind, solve problems or enhance our social wellbeing we have to enter an 'imaginative' state. However, daydreaming seems to be more than a functional necessity. It can be playful. It can entertain us, running feelings and ideas around in a simple chase of idle speculations. Perhaps we just daydream because we can.

However, there is another explanation for the phenomenon of daydreaming or conscious fantasy that is redolent of a dream, yet allows us to make decisions. In *The Archeology of Mind* (2012), Jaak Panksepp and Lucy Biven use affective neuroscience to explore our primary emotional systems. In their study of play, they discuss the unusual structure of mammalian brains, where the executive mechanisms for REM sleep are

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<sup>19</sup> Jerome L. Singer, *Daydreaming and Fantasy* (London: George Allen & Unwin Ltd, 1975) p.3.

situated deep in the ancient regions of the brain. They suggest an early form of consciousness, one where ‘in ancient evolutionary history, raw primary-process consciousness might have initially existed exclusively as a kind of dreaming-type wakefulness—one that was full of emotional arousals.’<sup>20</sup> They propose a theory that dreaming and play are related in that they ‘seem to be experience-expectant functions of the brain designed to evaluate past events as sources for creative and useful future behaviours.’<sup>21</sup> This is another way of addressing the function of anxiety as a stimulus for rehearsing responses. Panksepp and Biven go on to suggest that dreaming and play ‘may help organise information in the brain in ways that promote higher-order affective responses to future life events, in other words, maybe both play and dreaming allow animals to wrest solutions to complex problems that they confront in real life.’<sup>22</sup>

It is important to appreciate that evolution does not start anew but adapts and amends, recycling the old to better cope with the new world. To that end, our modified brain with its ‘emotionally-rich dream-life is a residue of the progressive evolution of the kind of dual mentality... (that) may facilitate complex problem solving.’<sup>23</sup> This new consciousness is no accident although it may be the result of a billion spins of a billion roulette wheels. We feel and think and impose a specific kind of meaning on the world because evolution has left us to do our best with these wondrous, imperfect mental tools.

The crux of Panksepp and Biven’s interpretation is that ‘when a highly affective, non-reflective, dream-type consciousness first evolved’, it was subject to gradual evolutionary influences to inhibit and restrict its primary emotional systems in favour of the development of higher, more complex brain regions, particularly in mammals. These evolving regions were able to carry out sustained reasoning in response to the sensations arriving from the outside world. This development saw the evolution of neural networks in the brain allowing higher, more cognitive forms of consciousness to develop:

the more ancient brain arousal mechanisms (were) remoulded as ones that controlled the arousal of REM sleep. In this way,

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<sup>20</sup> Jaak Panksepp, *The Archeology of Mind: Neuroevolutionary Origins of Human Emotions* (New York: W. W. Norton & Company Inc., 2012), p.377.

<sup>21</sup> *Ibid.* p.374.

<sup>22</sup> *Ibid.* p.375.

<sup>23</sup> *Ibid.* p.377.

dreams may still be controlled primarily by ancient emotional arousal states but by ones that in more modern animals allow cognitive information to be better integrated with emotionally stressful arousals. This could be a way to allow ancient frames of mind to still regulate higher information processing in more recently evolved animals.<sup>24</sup>

In effect, a balance of sorts was achieved between ‘ancient affective and more modern cognitive processes.’

## **Summary**

Cinema possesses a dream-like quality because like a dream, it presents us with images we have no control over—and when they are presented to us we try to make sense of them as a narrative. We do this as a function of alleviating anxiety. Unlike the state of dreaming or hypnosis, we experience cinema through a form of daydreaming, exercising our attention and decision-making processes in an active engagement with the narrative.

Panksepp and Biven propose that what we experience as human consciousness is a state many thousands of years in the making. This interpretation has fascinating implications. If applied to our universal predisposition for storytelling, it would seem to suggest that the phenomenon of narrative is a beautiful synthesis which we access as the resolution to different ways of seeing and engaging with the world. In effect, we are presented with an intriguing notion: the way we access narrative—and cinematic narrative in particular—is due to an evolutionary necessity, offering adaptations conferred upon the human brain as a means of resolving the conflict between two distinct forms of consciousness. This capacity for conflict resolution through profound cognitive abstraction when engaging with narrative in turn contributes to our ongoing ability to resolve the innumerable conflicts we encounter as individuals in a complex, confronting society.

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<sup>24</sup> Ibid. p.378.

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