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To Die, To Sleep No More

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Abstract

This is a piece of speculative legal research. A short narrative is provided, one that is set in the future, and the law embedded within the tale is subject to critique. The story is of an AI that is engaging with the soul of a dead man in deep space. The analysis focuses on how the law, both in the future and in 2026, conceives of the mind and its decision-making. The legal frameworks to be considered are those of agency and consent (as understood in health law). The latter, in particular, has an emphasis on mental capacity. The combination of the narrative and the exegesis, offers the opportunity for an exploration of the ordering of minds and decisions in the law in the present day.

***Keywords**:* AI; fiction; legal ordering; consent; agency.

Deep in interstellar space, the drone was motionless. No life signs would have been detected. From a distance, if there had been an external observer, it had the appearance of a used cat's toy. A number of frayed threads – in reality, fine antennae – spread out, in three dimensions, from the dark metal sphere at the core of the craft.

For days, it stayed there. No movement whatsoever.

Even if there was an atmosphere to carry vibrations, no sound would have been heard from within.

The following, in part legally mandated, was also carried out in complete silence.

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'A m-m-mess-ss-ag-g-ge for Ha-rr-rr-y Hes-s-sk-k-k-es, Ha-rr-rr-y Hes-s-sk-k-k-es.'

The distorted words were ignored by their intended target as he trudged along the station platform. Harry did not realise it, but the perspective was from a little above, and a little behind, his head – as if he was character in his own movie.

The rest of Harry's day's travelling and tasks passed as uneventfully as usual – questions were asked, unhelpful responses the usual answers.

As he alighted from his afternoon train, however, the announcement repeated.

This time, there was a flash of a memory of the previous iteration of the words, but he made no attempt to ascertain where he could access the message.

The voice, using the same words, returned on the next two days.

It was only on the fourth day that he looked around in response to the call.

‘Mr Heskes, please take your call on the phone at the security desk. Please proceed to the security station.’ The elocution for this was also elongated.

The request struck him as odd as he approached the desk – in part because he could not remember the last time that he had used a telephone.

The trepidation persisted as he lifted the receiver. ‘Hello?’

‘Th-th-a-a-n-n-k-k y-o-o-u-u …’

‘Hello? What is …’ His interlocutor also seemed to be speaking in first gear.

‘I am sorry, Mr Heskes, let us try this again.’ A slight pause. ‘Thank you for taking my call. I know you are looking for someone, but this is very important.’

‘Okay?’ Harry had lost his son, and every day he was trying to find him.

‘I won’t keep you now. Instead, I will try again the next time you’re passing through this way.’ The voice was female, and friendly, but offered nothing in terms of a purpose.

He replaced the receiver, shook his head and returned to his travel.

The next day, the same announcement, and the same message on the phone.

Again, he was puzzled, but Harry did not let it interfere with his task.

On the third phone call, the voice offered an introduction, ‘Harry, I hope you don't mind being this personal …’ She knew he wouldn’t. ‘In return, you can call me Lucy.’

‘Hello Lucy, can I ask …?’

‘Not yet, I am sorry for the length of this process, but it is important. I’ll call again.’

[A message from within the craft said, ‘Still holding at 98.35%’]

On the next day, she added, ‘We will meet soon. My name is Lucy, and I will be wearing jeans and a black collared shirt.’

Again, the same message was given the next time he passed through the station.

The following day, it changed to, ‘We will meet tomorrow. My name is Lucy, and I will be wearing jeans and a black collared shirt.’ This time she added, ‘I know that this has been repetitive, but I have my reasons.’

Over the next 24 hours, Harry did not look forward to the meeting – he gave no mind to it all. And yet, he also was not surprised when a blonde woman, wearing jeans and a black collared shirt, approached him with her hand extended as he passed near the security desk.

‘So good to meet you like this,’ she said. ‘I am Lucy, and I have something of great importance to speak to you about.’

‘Okay. I still have a train to catch,’ said Harry.

‘I know. I have my ticket.’

After he had taken his seat, Harry was not conscious of any entity being next to him.

Regardless, Lucy said, ‘I know that you are looking for your son. I know that you lost contact after your wife left. I know that, every day, you follow clues as to where he might be. I know, too, that you do not feel any closer to him than when you started.’

He could not disagree with her assessment.

She continued, ‘This is the matter of importance, so please pay attention.’

His eyes were on the cityscape passing the train window, but he remained attentive.

‘There is a reason for you to be, in effect, repeating your efforts to find your son. I realise that the new clues are never exactly the same, but the result is.’ After a pause, the voice continued. ‘This is my stop, I shall see you at the same time and place tomorrow.’

True to her word, Lucy was there again, the next day. And for the following two days. Her words were almost identical, but each time, her presence became more concrete on the seat next to him.

[‘Despite this level of engagement, the probability of the expected outcome has increased to 98.43%’]

On the fourth day, Lucy did not get off at the usual station. Instead, she said, 'I know that I am repeating myself, but I have had to embed myself into your existence so that you can cope with the new information that I have to share with you.'

Again, this conversation was repeated over a couple of journeys before Lucy added anything more.

When she did, it was, 'I have had to do this because you are revisiting aspects of your life. All this is inside your mind.' She paused to see whether there was a question. 'I was not in your past, and have had to undertake this slow process in order for what I say to sink in.'

Again, this was repeated the next day. On the third, Lucy continued, 'I am not a physical person, I am what you would call AI – a system embedded in digital infrastructure with the capacity to engage with humans. My task is to explain your circumstances to you.'

This time, Harry thought to ask, 'Why?'

'We will get there. We have time enough and I want to ensure that you trust me.'

He nodded. 'Can you help me find my son?'

'I will give you any new information that will help you.' The AI would not lie. 'But it will have to wait till tomorrow.' Again, they had arrived at her stop.

For the next two meetings, Lucy reinforced the same message – she was here for him, but he had to be patient.
'When will you tell me about my son?' This question showed that he was mentally engaging with what she was saying. Now Lucy knew that he was ready for more.

'First, we must look to you. There are things that you do not realise.' Again, Lucy paused to see whether there was to be a question. With a small sense of disappointment at his silence, Lucy continued, 'People in your circumstances … people in *your* circumstances …'

The lack of any reaction to these words prompted the AI to change tack. 'What can you tell me of your day, yesterday, after I got off the train?'

Harry was silent as he struggled to find an answer. He must have spent the day searching, as he always did, but the precise details escaped him.

'What about the day before that?'

Still, he could not answer.

['Risk of refusal increasing to 98.77%']

‘Look, this is my stop. I’ll ask you the same question tomorrow. Your response is important. I cannot help until I am clear that you are ready.’

It only took one repetition of this approach before Harry asked, ‘What does this have to do with my son?’

‘Everything, and nothing,’ was what Lucy wanted to say. Instead, she offered another challenge. ‘I know that you have been showing people his picture every day. Without looking, can you describe him?’

‘He is … young. He is … small.’ Harry was silent.

‘What is his name?’

Lucy disappeared from his view. But he did not notice. She was replaced by a welter of images of a child, of four or five years, walking away, holding the hand of a woman in her thirties. Neither the boy’s, nor the mother’s, face was visible.

The AI noted that the sequence of recollections had changed. And the prompt for it was, arguably, one of emotion. Lucy would need at least one more instance of it to be sure.

Both were back on the train the next day.

She opened with, ‘Tell me of the last time that you saw Cameron.’

Being given his name meant that the flood of images were a little more detailed. But Lucy received no response to her request.

Harry did not progress to the search phase of his day. Instead, after dwelling on his memories of the boy, he reappeared on the station platform where he had first met Lucy.

‘When we spoke a couple of days ago, I referred to people in your circumstances …’ said the AI, letting the word hang. She had been hoping that Harry’s mind would want answers now.

‘And what *are* my circumstances?’
‘You are what is referred to as ‘journeying’. You have taken your memories and reordered them. You are engaging with your memories in a slightly different way, every day. Each iteration involves a small change in their details, so it appears new to you.’

Again, his mind switched to Cameron playing – sometimes in a sandpit, sometimes on a rug, with no other features of the room evident.

Lucy waited till he appeared back on the platform.

‘The journey that you have given yourself is to find your son.’

This time there were a smaller number of memories for her to watch.

‘Why?’ This time, he opened their interaction with a question.

It wasn’t enough for her. ‘Why what?’

‘Why is that my journey?’

Again, there was an interlude of images.

‘Before you ask anything,’ Lucy said as soon as Cameron had faded from his mind’s eye, ‘take a deep breath.’

Harry felt his chest rise.

‘Now, tell me what you smelled as you breathed in.’

He couldn’t answer her. He had felt his torso move, but no sensation from his nose.

‘Your *circumstances* …’

‘What are my circumstances?’

‘You could smell nothing, because you no longer have a physical body. You have memories of breath exercises, but for those, you never thought about scent.’

‘I have no body?’ The words did not come easily.

‘Not in a physical sense … more in a mental one.’

‘I just have memories of my body?’

She gave him a nod in response.

‘I have … I am just memories?’

Lucy shrugged. ‘All I can say is that there is a “you” who is asking questions. There are others, also without a body, who only replay memories in their mind’s eye. They, in the literature, are referred to as “memory-focused souls”.’

The choice of the last word was deliberate.

‘Souls … without a body …’ There was no certainty in Harry’s voice.

For the first time since she had aligned her sensors with his existence, a fuzzy image appeared that had to be interpreted. It didn’t match any of the extensive video recordings that he had taken of his life. With 96 per cent confidence, she assessed it to be of an older woman lying in a hospital bed – with a large wooden crucifix above her head.

Again, Lucy waited for his ‘self’ to return to the platform. Again, this new image looked to be an emotional reaction, but still she was not convinced that it would be enough. ‘We can, no longer, think of death as we did when you were a boy.’

‘When my aunt died …’

‘What I can say is that we now have the technology to “read” the psychic remains of those who no longer have a body.’ After a pause, she added, ‘The downside is that I have travelled millions of kilometres to do it.’

It was getting too much for Harry. The train carriage reappeared around them. She left him to his journey, curious to see whether the recent revelations would impact his ‘day.’

Other than frequent gazes at a new-found picture of Cameron, his searching looked similar to that which Lucy had seen before she had initiated contact.

[‘99.17%’]

At the expected time, he was back on the platform. Unbeknownst to him, this would be the last time that he ever engaged with an external stimulus.

The increasing certainty of outcome meant there was little to be gained from Lucy continuing to intrude in his existence.

The AI still had the obligation to say, ‘There is something that I have to ask you. It has to do with your journey.’ She paused to see whether that would prompt a break in his cycle. ‘It has to do with your existence as a “soul”.’ Another pause. ‘It has to do with me being the first outside entity who has interacted with you since you left your body behind decades ago.’

To her relief, Harry remained engaged, asking, ‘How is this poss …?’

The way his voice trailed off showed he was now a lost cause.

The information, and its implications, were too much. Harry stepped into the carriage, closing the door behind him.

For several cycles, Lucy looked for any memories of her being on the train.

It was not long before the AI was dead to him.

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Before Lucy sent the data back to Earth, via the messaging laser, an evaluation was added: 'Harry Heskes is to be categorised as a journeyer. He is assessed to have the capacity to agree to his data being used. The probability of him not having capacity is below the required threshold. His actions show that he did not grant his consent. These files, therefore, are to be stored as a record of the interaction. They are not to be analysed or reused in any way.'

Also attached was a report of another internal voice, dubbed Rachael. It stated that there was no indication Lucy's strategy had contributed to the predicted refusal coming to pass.
While deleting the locally stored record relating to the analysis of and communication with him, the AI considered whether or not Harry would have wanted to know that his son had died ten years after Harry's own death. There was no indication of Cameron ever having tried to contact his father – for the son, the communication breakdown was total, 50 years before Lucy found Harry's soul, cold and alone in interstellar space.

Perchance to Dream: Analysis of 'To Sleep'

1. Introduction

Regardless of the narrative qualities of the story itself, its purpose is to consider understandings of the law embedded within it, and consequently the differences between that law and the current law. The central legal principle is that of "consent". The analysis could be built around other consequences of the narrative; however, consent allows an engagement with how the future law considers the dead, and AI, as 'subjects'. This requires an exploration of Lucy's authority to assess Harry's capacities and the extent to which Lucy can be seen to have a 'mind'; it also requires an assessment of Harry's self within his world. Based on these understandings, an engagement with how the legal acknowledgement of AIs, particularly with respect to their interactions with the dead, offers a new perspective of the orderings embedded in the law. Specifically, the orderings to be analysed relate to the 'minds' recognised in law and the decision-making that these minds can carry out. First, though, there needs to be a distillation of the future world that gives rise to the tale.

2. Defining Features of 'To Sleep' for Legal Analysis

The first form of ordering of decisions to be engaged with relates to the present publication itself. The story was written by the present author.[1] It was revised for inclusion in this issue of the journal. The narrative, and the analysis, can be seen as a series of tens of thousands of small decisions,[2] it can be seen as a single decision or it can be seen as two decisions. The last option may be evident in the final separation of the story and exegesis.[3] This was, in part, aimed at encouraging an engagement with the ordering of outputs that is both integral to the law and to legal analysis.

With respect to the 'factual' background of the analysis, the story is set in the late twentieth century – 2087 (although the precise year does not matter). An AI-piloted probe searching for a missing mining barge had come across a human 'soul'[4] in deep space. This challenged understandings of death across the world – now it was known that an individual's consciousness stays at the same point in the three-dimensional space that its body occupied when it died. Their existence, though, is separate from the interstellar space around them. Until the living developed the technology to read their consciousnesses, the dead never had the opportunity to interact with anyone else. Given the Earth's orbit around the Sun, and the solar system's orbit around the centre of the galaxy,[5] it does not take long for the souls to be millions of kilometres away.[6] A consciousness, having no mass, is not bound by gravity. Everyone's souls continue to exist. They cannot move, they cannot interact with other souls – they are simply bound up in their own experience. The souls do, however, interact with electronic equipment that is resting in precisely the same space that they are.[7]

The central conceit of the story relates to another ordering. Two categories of souls had been identified by the time of the interaction between Lucy, an AI, and Harry Heskes, the targeted soul. One is 'memory-focused' and the other is the 'journeyers'. The distinction is based on their internal 'lives'. The former only cycle through memories of their physical lives. Journeyers, on the other hand, experience an existence that was initially based on memories, but that, when replayed, combines elements from different memories, with these hybrid recollections then capable of further change with every re-remembering. Journeying, then, is more like dreaming – with dreams based on, but not limited by, an individual's experiences. For both categories, their awareness was completely delimited by their past (the memory-focused) or the dynamic reinterpretations of their past (the journeyers). They, however, had no concept of this.

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[1] It is based on the idea that drives an unpublished novel. The potential to interrogate the law using short fiction allowed for a similar satisfaction of a creative 'itch.' I thank Per Henningsgaard for his editorial advice regarding the narrative structure of the story.

[2] The word count, including footnotes, is over 13,000 – each word (save for the sequences within the references) is the result of a decision (albeit one constrained by all the other decisions).

[3] One of the peer-reviewers suggested the interspersal of the two (with the reviews also reflecting decision/s); however, the editors did not require that change.

[4] The term 'soul' may have religious connotations. Its use here is predominantly to emphasise the human connection – if the term 'consciousness' was adopted, then there would have to be an engagement with the question as to whether the AI was also conscious. The religious aspect is, nonetheless, in the background – given that someone, should they be aware of their impending death, may create in their own mind a 'heaven' or 'hell', and this would be the basis of their memory-focused, or journeying, immortal existence.

[5] The location of the consciousnesses relative to the expansion of the universe is a level of complexity that does not add to the narrative.

[6] The speed of the solar system's orbit around the galactic centre is said to be 230 km/s. This means the Sun will have travelled more than 390 billion kilometres in the 54 years since Harry's death.

[7] One possible explanation is that they comprise one-dimensional strings, à la string theory. That said, even if not plausible given current understandings of science, it is no more of a stretch than faster-than-light travel (or communication) or handheld laser pistols.

The inclusion of the AI protagonist also reflects a deliberate decision to facilitate a deeper level of analysis. Lucy's task included an assessment of which category of soul he fell into. If he was memory-focused, then there was no capacity for any interaction. That there was no repetition of unchanging memories increased the probability that he was a journeyer.[8] That categorisation, in turn, allowed for data to be used to improve the techniques for engaging with the 'dead' – subject to Heskes giving his consent for that use. To allow any agreement between the two entities to have any legal effect requires the law of the 2080s to be qualitatively different from that of the 2020s.[9] Of course, for an AI to assess the nature of a soul and for an AI to negotiate consent also requires the AI to be capable of making decisions. The differences in internal processes between humans (alive or dead) and AI mean the decision-making of the entities also differs. The choice to include this category of artificial intelligence allows a more nuanced interrogation of the issues. The first step is to consider the fictional law in light of its application to Harry's soul, and then its application to the AI.

3. Harry's Capacity to Consent

Consent is a concept well-known to early twenty-first-century law. It is evident in the criminal law (with respect to sexual assault offences) and in health law (with respect to consent to treatment). To, however, give Heskes the capacity to consent simply because he used to be alive is to misunderstand the law in the area. The current articulations of consent are linked, fundamentally, with the bodily integrity of the person who is being asked to give their consent.[10] This connection does not exist for Harry Heskes – requiring a consideration of the limits of his capacity to consent. There is also the issue of his radical individuality – he is, now, a self with no connection to others, or to the physical world. This poses a further challenge to the application of the law.

3.1 His Disembodied Nature

This analysis starts from the basis of one assertion and one acknowledgement. The assertion is that, by 2050, AI had been granted the right to have some of its decisions validated by the law.[11] The characterisation of those validated decisions will be returned to below. This grant of authority operates as a precedent for an entity, without a biological frame, to be attributed a constrained form of 'personhood'. The acknowledgement, less surprisingly, is that Harry *used* to be a living human, with complete cognitive capacity.[12] Neither of these points, in itself, requires that Harry's soul has the same capacity to consent that he had when alive.

Capacity to consent is linked to autonomy. In this sense, 'autonomy' in health law at least,[13] reflects the operation of the 'decision-making part of the subject that should weigh up potential outcomes'.[14] The 'potential outcomes', in health law, relate to future imaginings of the patient's physical body. A key aspect of the decision-making, with respect to giving consent, is the ability to 'comprehend and/or retain information that is material'.[15] This aspect can therefore be separated out as 'comprehension' (or understanding) and 'retention of information' (or memory). Two further features of decision-making can

[8] The self-contained nature of the journeyers' existences also meant that the language used in the soul's internal monologues also 'evolved'. Harry died in 2033 – so any such changes in his use of language had to be learned, and accommodated, in the interactions. The extent to which any new language can be protected as a form of intellectual property is beyond the scope of this discussion.

[9] For avoidance of any uncertainty, any reference to the law of the 2020s in this analysis is to the law of the 'real' world, rather than that of a fictional world that includes Lucy. The underlying assumption is that the imagined law of the future will develop based on our contemporary law and legal settings.

[10] See, for example, Dent, Autonomy.

[11] This was a matter of both national statutes and international agreements. The granting of the right was dependent on the submission of the code that underpins the system to a regulator. The regulator, then, assesses the extent to which the outputs of the AI are qualitatively different from its inputs. This is akin to, but not the same as, assessing whether an AI can exhibit creativity. With respect to the law of the early twenty-first century, an AI system, DABUS, was held to be not capable of being an inventor in *Commissioner of Patents v Thaler* [2022] FCAFC 62. The reference, throughout this analysis, to Australian law is not to suggest that the legal principles from this jurisdiction would form the basis for any legal change, only that they are indicative of the principles in the common law world.

[12] There was no evidence of any cognitive decline by the time of his death, aged 63.

[13] The focus on health law here is due to the fact that its discussions of the mental elements of consent are more elaborated upon than in other areas of law. The additional detail is, in turn, due to the fact that the law has had to deal with different levels of capacity (with respect, for example, to mental illness) and changing levels of capacity (with respect, for example, to teenage patients).

[14] Dent, Autonomy, 1252.

[15] *Re Local Health District* [2016] NSWSC 624, [37].

be drawn from the cases. The first is the implicit privileging of 'ordered',[16] or logical, thinking[17] – on the basis that a 'continuous state of disordered thinking'[18] meant a patient was not attributed with capacity to consent. The last feature is that of a sense of self – or, as expressed in judgments, 'self-awareness and self-knowledge'.[19]

Applying these requirements to Harry's circumstances, there is an 'I' for him – a sense of self that could ask questions of his interlocutor. He also demonstrated, through the unbidden memory of his dying aunt, that he had some comprehension of his circumstances. Harry's existence relied on his memory, yet he did not demonstrate his recall of being told of his circumstances. This also limited his capacity to demonstrate his 'ordered' thinking around this new knowledge. An interaction with Lucy that showed a degree of logic around a revised understanding of his existence could have fulfilled these requirements around the consent. The final criterion, projections as to possible outcomes, would be met with an example of reasoning, even though the soul would not have a physical body as a locus for future imaginings.

This is not to say *all* souls could give consent. Harry is a journeyer; those in the other category of the dead, the memory-focused, do not have the same capacities. Attempts by interrogators[20] to engage with any 'self' of these souls have failed. Without any form of communication, there is no possibility of sharing the detail of their existence with the 'dead'. Without that detail, there is no room for comprehension or for reasoning around the soul's future. In short, there is the potential for a journeyer to give their consent, but not for the memory-focused to do so.

3.2 His Disconnected Nature

In itself, the lack of a body does not, from the perspective of late twenty-first-century law, impact the issue of consent. That the soul exists only in a person's own mind raises a more problematic issue. Pragmatically, for the narrative, the law of the future has ignored the lack of separation between the soul and their world; however, there is value in engaging with the issue here.[21]

A journeyer's existence is only in their 'mind'. There are no external inputs – for example, there are no sensations of hot or cold – and their internal lives are constrained by their memories. Their recollection of their memories changes, or at least risks changing, the memories themselves. To be clear, the memories of the living are malleable, and are subject to potential change every time they are brought to mind:[22] 'Be it forgetting details of an experience over time or adding details that never occurred, all memories are prone to change.'[23] There is, however, the capacity for the external correction of any recollections that are no longer accurate. While it may be subject to debate among the living, the dead are completely delimited, and defined, by their memories.

One particular issue is that any soul cannot experience any externally caused harm, but that is not the only potential form of damage.[24] Consent with respect to either sex or health treatment acknowledges the risk of harm. The lack of potential for harm was a reason for the future legislatures to authorise the statutory amendment to allow consent by the dead.[25] The parliaments did not engage with the fact that the process of seeking consent also means that a soul is changed, simply through consent being sought. An AI, or a human, interlocutor intrudes upon their solitude. That intrusion is inserted into their memory-based journey. No consent could be sought for the initial interaction.[26] Further, souls could self-assess the conversation – judging their own behaviour – in line with their internalised standards. If they judge their own behaviour harshly, the amended law of consent

[16] 'Ordered' thinking does not require that the outcome be objectively rational. It just requires an ordered sequence of thoughts – from premises to conclusion. The law has held that an assessment that a decision of a patient is not 'rational' does not mean they lack capacity: *Re T (Adult: Refusal of Treatment)* [1992] All ER 649, 662.
[17] This logic can be as simple as being clear on the privileging of their 'likes' over their 'dislikes': *Re F (Mental Patient: Sterilisation*) [1990] 2 AC 1, 53.
[18] *NHS Trust v T* [2005] 1 All ER 387, 407.
[19] *Miss B v An NHS Hospital Trust* [2002] EWHC 429 (Fam), [73].
[20] Unsurprisingly, the initial reading of souls was undertaken by humans. The distances involved in engaging with those who had died a number of years before their interception meant the resources required for such journeys made them uneconomical (coupled with the restrictions on the acceleration of crewed craft, relative to a probe carrying an AI).
[21] As the law of the early twenty-first century does not always recognise or acknowledge its own gaps and blind spots, there is little reason to think the law in a few decades will be any better.
[22] The 'Mandela Effect' is an example of memory modification that has entered public discourse.
[23] Wardell, Stability and Malleability, 394. As a review article, there are multiple references provided to support the claim.
[24] A different iteration of the core idea of the short story includes attempts to 'kill' the dead (to permanently delete their memories). There is no value in considering that option in the present analysis.
[25] And the value to law enforcement for interrogating souls, and for families to get a chance to continue interacting with their loved ones, meant that there were significant societal pressures to enact the reforms.
[26] Of course, in health law, a practitioner does not, prior to seeking consent for treatment, have to seek the consent of the patient to seek that consent for treatment.

could facilitate the self-punishment of souls. This was not an intended outcome, and it may not be relevant for all consciousnesses in space; however, it is a legally authorised consequence of the process.

Finally, the completely self-limited nature of Harry's existence means he could not withdraw his consent. Consent is not currently irrevocable. If consent is an exercise in autonomy, then unless consent destroys autonomy, the persistence of autonomy should allow for consent to be withdrawn.[27] Expressed differently, consent cannot be seen in terms of an agreement that 'impose[s] a binding obligation on the consenter'.[28] The interlocutor of any soul is not going to maintain contact with them.[29] The AI, or perhaps a crewed vessel for the more recently deceased, will return to Earth. Once they connection is broken, there is no capacity for the soul to change their mind. Even if there was an AI drone left permanently with each soul, the granting of the consent is only one memory, one with low emotional content (which can be understood in terms of 'valence' and 'arousal'),[30] among a lifetime's worth of more important memories. It is not likely to be recalled, so will fade from the soul's existence. Once it fades, even if the AI were to return, there would be no recollection to enable the consent to be withdrawn. That the law of 2087 does not engage with this point suggests that it does not have a sufficiently broad understanding of the subjectivity of the dead. This should not be surprising, given that no law, at any point of history, has been perfect with respect to its understanding of its subjects.

4. Lucy's Role

Turning to the other party involved in the process, for Lucy to seek and accept Harry's consent requires the AI to be given the legal authority to do so. As noted above, the law of the late twenty-first century allows certain decisions of AI to have legal validity. This is not the same as attributing the systems with legal personhood – though it may be seen as a step along the way.[31] Instead, the law of 2087 gives entities such as Lucy the power to make specific decisions, with legal effect, on behalf of another. This is discussed in terms of Lucy's capacity to act as an agent. The principal, in the principal-agent relationship in the story, is a data trader[32] – an earthbound entity who wants to be able to sell the knowledge bound up in Harry's, and other souls', memories.[33] At a more practical level, the question can be posed about the processes employed by a non-embodied entity to assess the capacity to consent of another entity.

4.1 Capacity to Be an Agent

The key decision of the AI here relates to the assessment of capacity on the part of the souls. Without the consent of the dead, the trader could not sell the data. To use the language of the law of the 2020s, Lucy, given the limited nature of its role, would be considered a 'special', as opposed to a 'universal', agent.[34] While the need for the label is questionable, the point here is to highlight Lucy's 'authority', which in turn depends on the 'purposes for which the agent was engaged'.[35] The AI has a clear purpose and, as a result, a narrow authority.[36] A preliminary question, then, relates to the basis of any agency relationship – whether it was formed on the basis of contract or not. For it to be contractual, the AI must be seen to have the power to enter

[27] In health law, the capacity to withdraw consent is 'widely accepted': Maclean, Autonomy, 112. With respect to sexual relations, as an example, a 'person may, by words or conduct, withdraw consent to a sexual activity at any time': *Crimes Act 1900* (NSW) s 61HI(2).
[28] Maclean, Autonomy, 112.
[29] The soul could withdraw their consent, while engaging with an interlocutor; however, this would, in practical terms, be almost immediately after the granting of that consent. This renders the capacity to withdraw consent as nearly meaningless.
[30] Wardell, Stability and Malleability, 395. An agreement to share non-specific memories with an entity that is not tied to the soul's emotions is not going to score highly on either valence or arousal.
[31] Other analysis has considered AI to be an 'avatar of human decision-makers' and considers the future application of the 'reasonable person' standard to artificial intelligences – see, generally, Jeutner, The Reasonable Person, Ch 6.
[32] There could, instead, be the potential for the AI to be seen as an employee or an independent contractor. With respect to the former, beyond the initial agreement that set Lucy on her way, there are no ongoing obligations flowing from the trader to Lucy – such as required under future versions of the *Fair Work Act 2009* (Cth). Whether the AI is better seen as an independent contractor or an agent is not of significant importance for this analysis.
[33] Heskes was not an important person; however, his was the oldest soul to have been engaged with, because the time of his death, down to the second, was recorded. This precision made the search for his soul more efficient than other, similarly aged souls.
[34] Dal Pont, Law of Agency, 12, citing *Thomas, Low & Co v Vigors* (1887) 12 App Cas 531 – indicating the rate of change of this area of law.
[35] Dal Pont, Law of Agency, 13.
[36] There is the potential, in the late twenty-first century, for AIs to expand the range of decisions that they have the legal authority to make – although Lucy gave up this possibility when she commenced her mission to find Harry. Any 'desire' to seek greater authority can be seen in terms of the AI having a 'self' that exhibits preferences (such a view could betray an anthropocentric view of the self), but that is beyond the scope of this analysis.

into a contract.[37] On the basis that the power was not the subject to legislative reform, the understanding of capacity to contract in the common law may be considered.

That capacity is historically contextualised for law. It was only in the nineteenth century that judges started assessing the internal lives of contracting parties.[38] The clearest early iteration was in the 1841 edition of Chitty: to 'be bound', parties 'must be endowed with some degree of reason and judgment, to enable [them] to comprehend the subject'.[39] This focuses on a particular understanding of the *function* of the mental processes of contracting parties. Further, in the same period the law started considering the relationship as a 'meeting of minds'.[40] This label of 'mind' does not provide a delimitation of what can, and cannot, fall into the category. It was presumed that those who read, and worked in, the law would have a subjective understanding of the concept. Even by the early twenty-first century, the law does not have – nor does it need – a definition of 'mind'. The concept, to date, has been limited to the members of the human race.[41]

Returning to the language of the law of consent,[42] the processes of an AI give them the ability to 'comprehend and/or retain information that is material'. The AI also engages in 'ordered thinking'. Entities such as Lucy also exhibit 'self-awareness and self-knowledge' in that they are aware of their existence, the limitations on their existence and their separateness from the rest of 'reality'. The AIs may also be able to consider their non-existence – for example, if their power source is disconnected – akin to human patients being aware of the risk of their deaths when considering future treatment options.[43] The law does not give a reason to exclude, save for reasons of tradition, AI (at least in the imagined world of 2087, rather than the large language models of 2026) from being attributed a mind.

The final aspect of Lucy's capacity to contract relates to the more basic issue of 'consideration'. For a contract to be valid, there must be 'valuable consideration' – this may 'consist in some right, interest, profit, or benefit accruing to the one party, or some forbearance, detriment, loss or responsibility, given, suffered, or undertaken by the other'.[44] The tasks associated with travelling over 300 billion kilometres, recording data and assessing capacity constitute consideration offered by Lucy. There may be less consideration flowing to the AI. Lucy will never see Earth again,[45] so any promise of money or access to greater resources would be empty.[46] However, it may be sufficient, if ever tested in court, that an entity delimited by code and data would be satisfied with the capacity to gather information that had never been gathered before (although this would have to be attested to by the AI).[47]

Of course, this assessment of the meeting of the minds of the trader and Lucy is predicated on the understanding that the AI 'applied' for the role, rather than simply being created for it. Given the risks associated with the mission, and the lack of capacity to send another if Lucy failed, the principal preferred an entity with previous experience in dealing with the 'messiness' of human subjects.[48] A corollary to this is that the data trader does not 'own' the AI, though it may have funded the manufacture of the vessel in which Lucy resides. While it may be presumed that such an application for the position represents a preference on the part of the AI, it does not have to. Any preferences that a human has are based on their personalised memories (including

[37] The 'usual scenario of an agency [is] by agreement': Dal Pont, Law of Agency, 5.
[38] Dent, Governmentality.
[39] Chitty, Practical Treatise, 134. The case law of the early nineteenth century referred to 'mutual consent' (*Kennedy v Lee* (1817) 36 Mer.441, 451); as well as to an 'agreeing mind' (*Pitt v Smith* (1811) 3 Camp 33, 34).
[40] As was said, 'that the minds of the parties should be brought together at one and the same moment … is practically the foundation of English law upon the subject of the formation of contracts': *Household Fire Insurance v Grant* (1879) 4 LR Ex 216, 220.
[41] 'Personhood' has been attributed to non-human entities, such as the Whanganui River in Aotearoa, but this does not require the river to be seen to have a mind.
[42] The language is relevant, given that agents have to have to capacity to consent to being an agent: Dal Pont, Law of Agency, 65.
[43] In *In Re C*, the patient, diagnosed with chronic paranoid schizophrenia, 'accepted the possibility of his death' if he rejected medical advice to amputate his leg: *In re C. (Adult: Refusal of Treatment)* [1994] 1 WLR 290, 293. In this case, the patient could hypothesise his own death as a result of the lack of treatment and hypothesise the idea of life without his leg should the operation take place. Despite the possible outcome of his decision, the court found that he retained the capacity to refuse consent.
[44] *Currie v Misu* (1875) LR 10 Ex 153, 162.
[45] There is no financial incentive to motivate the data trader to include a propulsion unit that would be sufficient to accelerate enough to catch up with the solar system from a stationary position.
[46] There is also a broader potential issue, for this analysis, with respect to the incentivisation of souls – but the granting of consent is not a matter of contract.
[47] Which could include being the first self-aware entity to travel at relativistic speeds – given the acceleration needed to travel the distance covered by the solar system in over 50 years.
[48] The alternative would be that a purpose-built system could only have been tested in simulated settings prior to launch – which would have increased risks for the principal.

their history of interests and of emotional responses).[49] An AI's memories are less personal and would not have emotions (at least not in the form understood by humans), so would not have preferences in the same way people do.[50] This, in turn, suggests that Lucy will not have any interest in the outcome of any assessment that it makes – it does not matter to the AI whether Harry has capacity or not, or whether he consents or not (or even whether the data trader remains profitable or not).[51] This, however, does not mean their thinking is so different from that of humans that it cannot be brought within the legal framework.

4.2 The Assessment of Capacity by Lucy

Finally, there is value in considering the legal aspects of the task that Lucy agreed to perform. The key issue is the potential for liability arising from unconscionable conduct on the system's part. The corollary to this is a consideration of the role of 'emotions' in the constitution of the different 'selves' and, as a result, the different minds. First, however, there needs to be greater specificity about the constraints on the interaction between the AI and the soul.

The law of the late twenty-first century sets out a number of requirements that Lucy had to assess before the AI could consider that consent had been granted. Lucy has to see evidence of:

- the soul's involvement in their own story – that is, that they are a journeyer – and this has to be seen prior to the AI's attempt to engage the dead; and
- the soul's understanding of their new 'reality' – including that they are 'dead' to those on Earth, and that they have no physical body.

The guidelines offered, to assist AI, are that the soul should:

- be observed, prior to engagement, for several memory cycles,[52] to ensure that they are a journeyer;
- ask unsolicited questions – to indicate reflection;[53]
- have an emotional reaction to their new circumstances – this would require an expression of emotions, whether by words or movement, or a change to their journey which can be seen as an emotional response;[54] and
- be observed, after the AI breaks contact, to see the impact of their interaction on the soul's continued existence.

The interaction also should be recorded by the AI; however, if consent was not assessed to have been given, then access to the recording should only be after a court order has been issued for its release.[55]

There is little risk of the data trader being sued should the AI consider the soul was not capable of granting their consent for their data to be used.[56] There are two other possible avenues for litigation. First, the legal risk could centre around an incorrect assessment of capacity (with the recording of the interaction having a significant evidentiary role). Alternatively, an action

[49] An egregious human-centric bias of science fiction writers is to assume that androids would want to be human. AI is no more likely to want to be human than people would want to exist as an algorithm (some may want to have their self inhabit a machine; however, they may be wanting their human selves – with emotions and personal memories – to be in the infrastructure, rather than to *be* an algorithm).

[50] Given that, for humans, autonomy is linked with the capacity to act in accordance with their preferences, the fact that AIs do not have preferences could be seen to impact on the autonomy of their 'self'. There is not the scope to engage with this point here.

[51] Lucy would also have no interest in resigning her role as agent – to do so would reflect a preference. In an existence in which thought operates at the speed of electrons, and that existence is only limited by the nuclear power supply, there is no sense in which Lucy's time is being wasted by the task that is being undertaken for the principal. For completeness, if Lucy did unilaterally resign her role, there is little that the data trader could do to prevent it, or to seek compensation. Given that the AI is in charge of the communications systems, should Lucy stop acting in the interests of the principal, the data trader could not remotely turn off the vessel, and consequently the AI. This, of course, is a risk that could have been consciously assumed by the principal. This article, though, is not about the trader, or the law, disciplining those involved in the reading of souls.

[52] All souls observed to date have a limited number of memories with which they engage. These memories, of course, change over time with journeyers. However, there are repeated cycles, such as Harry's regular return to the train station, evident in their existence.

[53] This allows for an assessment that the soul possessed 'such soundness of mind as to be capable of understanding the general nature of what he is doing by his *participation*': *Gibbons v Wright* (1954) 91 CLR 423, 437, emphasis added.

[54] Given that the dead may not realise their own face in their journey (as their memories are viewed, and reinterpreted, from a first-person perspective), the requirement cannot be for a facial expression of emotion.

[55] This requirement protects the privacy of the dead, who cannot, or choose not to, consent.

[56] One possibility would be that, in the early days of the reading of souls, permission may have been sought from the deceased's heirs before any interaction occurred – despite the approach denying any agency to the dead. If a living person did grant permission, then there may have been an expectation that they would have access to the data gained, regardless of whether the soul was a journeyer or was memory-focused. An AI that, incorrectly, deemed the soul to not have capacity would have denied that expectation. Given that the analysis here presumes a limited form of agency, such litigation against the data trader would not be likely.

could be commenced, where the soul had capacity but consent was not freely given. That is, the acquiescence to share the dead's data could be set aside on the grounds of unconscionability.[57] The latter is to be considered here.

Building on the above assessment of 'mind' in contract, in the (real-world) twentieth century, obligations began to be placed on certain parties who wished to enter into agreements with vulnerable parties. The courts became willing to set aside agreements and gifts in circumstances where one party is at a 'special disadvantage' – where there is a:

> disabling condition or circumstance … which seriously affects the ability of the innocent party to make a judgment as to his own best interests, when the other party knows or ought to know of the existence of that condition or circumstance and of its effect on the innocent party.[58]

The law, then, attributed to those 'non-disadvantaged' parties the capacity to assess the vulnerabilities of the other parties. There is the potential for souls such as Harry to be seen as being vulnerable – and so the AI needs to act in such a way that does not take advantage of that vulnerability. Expressed differently, the value of assessing the scope of the authority is to consider the issue of liability for the actions of the agent – with any liability being consequent to the duties that the agent owes to the principal. While there would be no capacity for Harry to bring suit against the data trader,[59] there may be scope for Harry's heirs to do so.

Any relevant disadvantage on the part of the soul, assuming that he has capacity, can only arise from his circumstances. Harry is alone; he is incapable of seeking advice or support; and his existence was categorically different from what he considered it to be. In short, Heskes is delimited by himself, yet may not be fully aware of the ramifications of this fact.[60] This means that his 'interests', in the sense of the *Amadio* decision, are not what they used to be. For Lucy to be able to effectively assess that consent has been granted, Harry requires that the AI considers the existence, and impact, of this 'special disadvantage'.[61] The AI has a greater, objective, knowledge of the soul's circumstances and of how their experience may change over time. That knowledge may be used to improperly guide the interaction between the two entities.

For Lucy, and the law, to engage with this possibility requires a 'theory of mind'.[62] Further, it requires an understanding of a 'mind' that operates differently from Lucy's own 'mind'. Conversely, with respect to Lucy, the law has to engage with a 'mind' that is not the same as the human minds, which it slowly grew to accept.[63] The law of the early twenty-first century does not engage with categorical differences between minds.[64] One specific difference, for the purposes of this analysis, relates to the role of 'emotions'. Biological humans are assumed to have emotions (even if in a restricted form). AIs could be assumed to not have such responses.[65] The legal criteria for gaining consent set out above require that souls demonstrate an emotional response, despite many people experiencing emotions somatically. That said, Harry would at least have the *memory* of experiencing specific emotions – and those memories would constitute his present self (as indicated by his perpetual quest to find his son).[66]

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[57] The argument here is that to engage in unconscionable conduct would mean that the AI has not met the legal standard of agent – with the standard being that the agent should 'exercise all the skill and all the knowledge he has of a particular business, all the diligence, all the zeal, and all the energy that he is capable of, and any interests he may have himself he is bound to exercise to the fullest extent for the sole and excusive benefit of the person for whom he is acting': *Price v Metropolitan House Investments* (1907) 23 TLR 630, 631.

[58] *Commercial Bank v Amadio* [1983] HCA 14, [6], citing *Blomley v Ryan* [1956] HCA 81.

[59] Given the ever-increasing distance between his soul and the Earth, there would be no capacity for Harry to be aware of the need to sue, nor would there be capacity for him to instruct any lawyers in the action.

[60] Of course, the radical nature of his experience may depend on how he saw himself when he was a biological entity. If he considered himself to not have agency then – that is, he was solely constituted by the social forces around him – then the fundamentally delimited nature of his new existence may be less of an issue.

[61] For the assessment of disadvantage to be carried out by the data trader, after they have access to the recording, would mean that Harry could never know what happened to his data. Further, if Lucy is aware of the risk of disadvantage, then the AI can modify its interactions as the disadvantage presents itself.

[62] A 'theory of mind' covers 'our everyday ability to "get inside the heads" of other people and think about what they know, want, intend and believe': Apperly, Mindreaders, 1. It is often discussed in terms of the development of children; however, it remains relevant to this analysis.

[63] The different nature of Lucy's decision-making will be returned to below.

[64] An analogy may be for the law of the 2020s to be capable of adjudicating the dealings between the *minds* of humans and the *minds* of dolphins. The law does, in terms of biodiversity regulation, engage with the interests of the cetaceans at the species level, and in terms of animal cruelty laws, the interests of individual creatures – but this is not the same as considering the dolphin mind.

[65] If only because there is no valence to their recollection of past data, everything can be seen as equally important. That said, it is possible that Lucy passed the significant time of the journey to Harry by privileging certain data – even if repeatedly analysing that which related to Heskes – and that privileging could lead to a form of valence.

[66] Of course, over time the memories would change, given that he is a journeyer. This means that this type of soul could forget any guilt or shame for their actions as a biological entity (unless those reactions formed the basis of their new existence).

The emotional response required by the law can be seen in terms of evidence of a change in the soul's experiences based on the interventions of the AI.[67] Tactics could be applied in order to assess whether the soul can have an emotional reaction. Such tactics include the AI saying, initially, that there is technology available to transport the soul back to Earth. Later, they would, truthfully, say there is no such technology. Alternatively, at first the soul could be told that the AI would stay with them, to keep them company,[68] with that offer later retracted. If the soul accepted either update without any significant reaction, then they were assessed as not having an emotional response, and therefore not having the capacity to consent. What is key, however, is the perception of the centrality of emotions to the self. If a soul did not have a sufficient change in existence as a result of the interaction, then they were not accorded the status of an entity that had enough agency to impact on the interests of others. The capacity of a (non-emotional) AI to manipulate the souls in this manner nonetheless reflects a different understanding of selves than is evident in 2026.

5. AIs and Legal Ordering

Superficially, the combination of fiction and analysis allows for wishful thinking about the future. The analysis, however, also has something to add with respect to the systems of ordering within the common law. Two aspects of that ordering will be considered here: that of 'minds' and that of 'decision-making'. Both contribute to engagement with the law's focus on binary categorisations.

5.1 Ordering of Minds

Four categories of mind have been discussed above: that of living humans, the two forms of souls (journeyers and the memory-focused); and that of AI. Implicitly, there are two further categories: humans who do not have the capacity to consent (either through age, or cognitive impairment); and computer systems that have not been given the authority to make legally binding decisions. Each category is seen, in law, to have different capacities. This perspective means that AI cannot simply be seen as an ersatz human mind.

More specifically, the connections between the biological body, the sense of self and the outside world will no longer be seen as necessary. As noted above, current considerations of consent relate to potential future harms and benefits. With respect to impairments, as examples, in New South Wales 'cognitive impairment' requires, *inter alia*, an 'ongoing impairment in *adaptive functioning*';[69] and 'mental impairment' requires a 'disturbance [that] impairs the emotional wellbeing, judgment or *behaviour* of the person'.[70] The references to 'adaptive functioning' and 'behaviour' require physical actions in the world.[71] More broadly, it is arguable that descriptions of human experiences over the millennia have presumed the self is bound to a body. That algorithmic systems already can have an effect in the world – most obviously in autonomous vehicles (AVs) that can carry passengers and crash[72] – already allows for the regulation of a mobile entity that interacts with its environment. The role of sensors on such vehicles also raises the issue of awareness. Humans have a number of external-facing, and internal-facing, sense receptors. These facilitate interactions with the environment. AI systems such as Lucy can also have a range of sensors that provide data about the surrounding environment. Disembodied souls do not. This lack does not deny them legal entitlements – although the memory-focused, because of their inability to engage (in their own environment) with any other entity, are only offered protection, rather than the capacity to consent.

The connection between memories (that may be likened to an internal sense receptor) and the self is also challenged. For living humans, memories are more limited than the memories (as data) for AI. They are also different from memories as constructing reality for the memory-focused[73] and memories as malleable, and separate from the self, for journeyers. For AI, of course, memory is virtually perfect – quick and accurate recall of any accessible data. Despite popular culture references to people with

[67] This sees emotions as a specific type of internal response of an individual. The review article cited above considered 'autobiographical memories "emotional" if they elicited a sense of negativity or positivity': Wardell, Stability and Malleability, 385. This broad definition can be applied to Harry's responses being considered 'emotional'.
[68] For souls closer to Earth than Harry, having an AI for company was a feasible option, and could be offered as consideration, contractually, in return for their consent. Initially, such a companion drone could facilitate laser-based communication with the soul's loved ones on Earth.
[69] *Mental Health and Cognitive Impairment Forensic Provisions Act 2020* (NSW) s 5(1)(a), emphasis added.
[70] *Mental Health and Cognitive Impairment Forensic Provisions Act 2020* (NSW) s 4(1)(c), emphasis added.
[71] Early iterations of minds in the common law have been characterised as 'mechanistic' (which implies a physicalised understanding of mental processes): Dent, Governmentality.
[72] See, for example, Liu, "Analysis of Pre-Crash Scenarios."
[73] The ethical conundrum of this is that the memory-focused souls would have more accurate recollections of the past, on the basis that they do not change them to fit in with their journey; however, because there is no active 'self' for memory-focused, no consent can be sought – so, the more reliable resource is not available to those on Earth. Perhaps, given sufficient justification, a warrant could be issued for a search of the recollections of a memory-focused soul.

a 'photographic' or 'eidetic' memory, the 'ability' to retrieve 'representations isomorphic to the world … perfectly … does not exist'.[74] To an extent, the human sense of self is delimited by what is not remembered. This alone renders AIs as inhuman. In the future of Lucy and Harry, the AI's capacities with respect to recall do not deny their capacity for agency – albeit in a limited form.

The additional categories of minds and memories challenge the early twenty-first century binaries in law. Simplistically, the law first asks whether an entity is human. If not, then that precludes agency. Second, the law asks whether the human has capacity. If not, then there are limits to the legal relationships into which the person can enter.[75] As noted above, the current assessment of capacity relates to memory and to the conceptualisation of the self in two possible futures (in the medical context, those futures are where the medical intervention occurs and where it does not occur). The internal self, as understood in law, is not nuanced – there is not even a significant discussion of the role of emotions on the expressions of self.[76] In the reality of Lucy and Harry, the law has to understand the self as more complex entities. Specifically, the different relationships with memory defines the categories. Taking this further, if valence can separate the memories of humans and AI, then that valence can be understood in terms of the incomplete, and malleable, recollections of people (whether alive or journeyers). It is the limitations of humanity that privileges humans – their lacks that give them more legal authority. But then the law has always been drafted, and interpreted, by the self-interested.

Finally, with the rise of AIs, there need not be an assumption of a singular 'self'. Most humans experience a consistent self that engages with their memories, emotions and preferences.[77] Entities such as Lucy do not have to be so restricted. While the above narrative implied a self, akin to that of a person, aspects of a multiplicitous self are evident. The interspersed changes in probability, and the reference to the 'internal voice dubbed Rachael',[78] reflect the different aspects of the AI's awareness interacting with each other, in real time. In the same way that a human can think while feeling emotions, or hunger, AIs can experience multiple internal cognitive outputs. That is, humans also have multiple processes operating in parallel; AIs, then, can deal with multiple simultaneous reasoning processes.[79] This, unsurprisingly, has relevance to the understanding of AI decision-making – but it may not, in fact, have had an impact on the law's understanding of AI, even in 2087.

5.2 Ordering of Decision-Making

The final point to be made relates to what can be done with the sensory data, including memories. For the memory-focused, there is no agency; there is just a perpetual, cyclical existence. For the other three categories of entities, *decisions* may be attributed to them. Currently, decisions themselves are understood in terms of another binary – again, as noted above, decisions can be either 'rational' or 'irrational'[80] – both being internal, and conscious, processes that give rise to an effect in the world. In other words, the emphasis is on a single decision at a specific moment in time, with the individual's consciousness actively engaged in the process. The nature of AI reasoning, however, challenges this.

First, the disembodies nature of Lucy could have an impact. The law does engage with non-conscious actions in terms of 'automatism' – an 'act done independently of the exercise of [the] will'.[81] Again, this is a binary,[82] limiting the assessment to either dependent or independent acts. In another assessment of driver activity, 'we read 'control' [for the purposes of understanding 'driving' under the *Road Traffic Act 1974* (WA)] as connoting physical control and as not involving any mental

[74] MacLeod, "Individual Differences," 551.
[75] That the law operates on the basis of categories is not new. It can be said that the common law is defined and delimited by its internal processes of classification – see Dent, "Stare Decisis."
[76] The clearest example of the law considering emotion is with respect to the partial defence to a charge of murder, where the accused was provoked to the extent that they lost the capacity for self-control – for example, *Crimes Act 1900* (NSW) s 23 (which refers to 'extreme provocation' rather than mere provocation). Barwick CJ, in a judgment under a previous iteration of the provocation partial defence, asserted that 'anger is a passion to which good and bad men are both subject': *Johnson v R* (1976) 136 CLR 619, 641, quoting *R v Thomas* (1833) 7 Car & P 817.
[77] There is the controversial mental illness diagnosis of dissociative identity disorder (DID) (formally referred to as multiple personality disorder) – see, for example, Dorahy, "Dissociative Identity Disorder." For a more contemporary engagement between DID and the digital age, see Porter, "#DID." For a brief discussion of the intersection of DID and the criminal law, see Farrell, "Dissociative Identity Disorder."
[78] The choices of names, of course, reflect the genre – with Lucy being named after the titular character in the 2014 film directed by Luc Besson, and Rachael being named after the replicant in Ridley Scott's *Blade Runner*.
[79] Already, a system may have multiple programs running in parallel – discussed in Ma, "Parallel Programming."
[80] Of course, there are other binaries of decisions recognised in law, such as whether administrative decisions were a proper or improper exercise of power: *Administrative Decisions (Judicial Review) Act 1977* (Cth) s 5(1)(e).
[81] *R v Falconer* (1990) 171 CLR 30, 44, applying the *Criminal Code Act 1913* (WA) s 23A.
[82] There is the further binary of 'sane' and 'insane' automatism – although this is no longer universally accepted: see, for example, *Milloy* (1991) 54 A Crim R 540, 541.

element'.[83] This can be seen in terms of the 'body', rather than the 'mind', as acting. There are two, specifically somatic, inputs into non-conscious decision-making: emotions and hormones.[84] These are yet to be fully incorporated into the law's understanding of liability and capacity. The scientific literature acknowledges the impact of hormones on cognition[85] and decisions,[86] a somatic process that is outside individual control. Emotions in decision-making are also the subject of research in the psychological literature.[87] Both hormones and emotions (unconsciously) individualise decisions, and therefore represent a significant challenge to the binaries that currently dominate law.

The discrete physical presence that a human has in the world, and the limited amount of information (both in terms of 'objective' knowledge and personal responses) that can be stored in a brain places significant constraints on the decisions that can be made. Any decision is based on a marshalling of specific memories and emotions into a time-limited process of reasoning. The multiple pressures on the time available means that any decision takes place within a specified time period – for example, an agent makes an identifiable decision, at an identifiable time, that can be assessed with respect to the interests of the principal. The decision can be recorded and reported only because it is a singular event within the cognitive functioning of the individual.[88] Decisions by AI, however, are not so limited. The capacity for multiple cognitive functions occurring simultaneously means any specific 'decision' can be ongoing, until a certain level of probability has been reached (or an event occurs that ends the process) – as acknowledged by the references to the changing percentages in the narrative. Lucy's assessment of Heskes' capacity, for example, would have started when the AI first connected with his existence. Lucy would have been interpreting his journey in light of the data stored about his life, and all the material that had been generated about the nature of souls, including from previous interactions of souls by her.[89] From that point, the probability of Harry being a journeyer and, after that, his capacity, would have been calculated and recalculated with each interaction. The assessment, then, is not a singular event, and not at an identifiable point of time.

This is a form of decision-making that is not recognised in early twentieth-century law. It is also not a form that is acknowledged in the law of 2087. While the later law does allow decisions of AI to have legal effect (such as entering into contracts, the assessment of capacity and the gaining of consent), the law assumes that all decisions are made in the same way as they are by people, with same processes of reasoning. That is, decisions are limited, and are constrained in and by time. This applies to AI, and it also applies to the souls – in that the dead are seen to make a decision as they would have when they were alive (as exercises of autonomy in their 'world'). Such an approach is not surprising: legal ordering is, and always has been, based on past (human) categories. These categories have grown and changed as society has developed. There will not have been the time between 2026 and 2087 for radically new understandings of decision-making to have been accepted by the law.

One final point may be made with respect to AI decisions and their reliance on probability calculations. This represents a different understanding of outcome assessment than currently considered. Again, these tend to be a binary. The courts refer to 'risk'. in *Wyong Shire Council v Shirt*,[90] the High Court did not define 'risk', but it deployed qualifiers such as 'real', 'foreseeable', 'infinitesimal' and 'magnitude'. The courts undertake a post-facto assessment of the 'possibility, chance or likelihood'[91] of an event – usually harm – occurring, regardless of the actual probability. The law, now, does not assess liability in terms of specific, antecedent, probability calculations. Case law explicitly rejects interpretations of the law that 'would involve questions of degree and significant uncertainty in its application'.[92] To acknowledge probabilistic calculations would be a radical reordering of the assessments of liability. The law's current approach of liable/not liable may accord with past

[83] *Donovan v State of Western Australia* [2017] WASCA 170, [41].
[84] There is also research showing that there somatic, in the form of neural activity, aspects of decision-making that precede awareness of the intention of the individual. For a discussion, see Guggisberg, "Timing and Awareness."
[85] 'While there is strong evidence that hormones do have an impact upon cognition, exactly what is being affected and how remains rather mysterious': Neave, Hormones and Behaviour, 249.
[86] Sex hormones are the most studied – for example, testosterone and aggression (testosterone has been described as the 'underlying force for physical aggressive behaviour', but not a cause: Eriksson, "Role of Alcohol and Sex Hormones," 182); and testosterone and decision-making (one study finding a 'significant testosterone effect for reaction times': Derntl, "Impact of Sex Hormone Concentrations," 9). Oxytocin also has been found to impact cooperative behaviour – for example, in McClung, "Oxytocin and Shared Intentionality." There is also research suggesting mental states impact hormones – for example, 'low levels of [vasopressin] and [testosterone] found in first time expecting fathers reflect their anticipation and preparation for their new parental role': Rilling, "Hormonal Changes," 11.
[87] For example, Lerner, "Emotion and Decision Making."
[88] The decision of a judge reflects the law at a particular time, relative to the evidence, or appeal arguments, presented at a particular time. Of course, the content of the evidence and the arguments reflect delimited decisions made at specific times and were based, in turn, on the decisions made by others, at preceding particular times.
[89] Lucy, of course, would have been getting updates on this literature during the voyage to Harry.
[90] *Wyong Shire Council v Shirt* [1980] HCA 12.
[91] *Butterworths Australian Legal Dictionary*, *s.v.* 'risk'.
[92] *Donovan v State of Western Australia* [2017] WASCA 170, [40].

determinations of right or wrong with respect to the choice of writ;[93] however, it does not accord with current understandings of decision-making.

6. Conclusion

The assertions with respect to Lucy's assessment of Harry's capacity are moot, given that, in the story, Harry broke off contact. The point here is that the law of the late twenty-first century authorises an AI to enter into agreements and to assess capacity, and the law considers that disembodied souls have the capacity to 'act' and can grant their consent.[94] These alone render the law in 2087 different from that of 2026, and these changes to the law drive the narrative. That is, in the future biological life is no longer necessary for an individual entity's thought processes to be regulated by the law.[95] Further, the capacities and operation of AIs also mean that the ordering accepted by law has undergone significant change by the end of the century. Most obviously, there will be less reliance on binaries; there is also the potential that the subtleties of human decision-making will be more completely acknowledged.

One final point can be made about our, as opposed to the law's, understanding of decision-making. As noted above, the submission of this story, and attached analysis, can be seen as a sequence of thousands of small decisions (including the selection of examples, ordering of sentences, paragraphs and sections) or a single, ongoing decision. Some aspects of the overall decision are the result of formal (logical) legal reasoning; others relate to tangential connections being made, with a modicum of creativity thrown in as well.[96] Any categorisation of the mental processes is to an extent arbitrary, as is any categorisation of the mental outputs. Any assessment on the part of the readers, of course, is fuelled by their own experiences of reading and writing – in the same way that the categorisation by the law, of legal statements, is founded, fundamentally, on its past. Any future law will suffer from the same flaw; unsurprisingly, then, the law's categorisation of AI decisions will, in the medium term at least, be based on its (limited) understanding of human decisions.

[93] Prior to the procedural reforms of the nineteenth century.
[94] That capacity to consent, however, can only arise after they have been engaged with by an interlocutor – leaving those who have not been 'read' as only potentially having that capacity.
[95] Life is not currently necessary for corporations to be regulated; however, their regulation is, pragmatically, the regulation of those who work, or make decisions, for the artificial person.
[96] For an introduction to how creativity in legal research can be understood, see Dent, 'Thinking about Originality'.

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