

## Near-Death Experiences: Extended Naturalism or Promissory Physicalism? A Response to Fischer's Article

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In this commentary, we respond to Fischer's main thesis—"I do think that mainstream science could *in principle* someday explain NDEs (although it hasn't yet)" (Fischer, 2020, p. 174). We draw on earlier points we published in two critical articles in the *Journal of Near-Death Studies* (Mays & Mays, 2015, 2017a). In this article, we refer to the book, *The Self Does Not Die* (SDND) by Titus Rivas et al. (2016), which we consider an excellent compendium of verified paranormal phenomena reported in association with NDEs. We notate these references as SDND with specific pages, cases, or chapters.

### 1. Fischer's Reliance on *Ad Hoc* Hypotheses

In earlier writings on NDEs, Fischer used four well-known NDE cases to show that selected elements from these cases are readily understood with *physicalist* explanations. These cases are Pam Reynolds (SDND, case 3.29, Chap. 11); the man with the dentures (SDND, case 3.7, Chap. 11); Colton Burpo (SDND, case 5.2); and Eben Alexander (SDND, Chap. 11). In our earlier critique, we pointed out that the authors proposed three *ad hoc* hypotheses to explain the anomalous aspects of the NDEs: (a) during anesthesia or during cardiac arrest, ambient sounds or other nonvisual sensations can still be "recorded" in the brain and later brought back to consciousness; (b) the fear of dying causes the NDEr to imagine meeting deceased loved ones in order to receive comfort; and (c) NDErs can unconsciously piece together imaginations and confabulations *after* their NDEs and later embellish the account with further information inadvertently provided by listeners during the retelling (Mays & Mays, 2017b, p. 111; see also Mays & Mays, 2017a, pp. 73–74). "*Ad hoc* hypothesis" is a term of art in scientific circles describing a hypothesis that is added to a theory to explain an anomalous result that is not explained by the theory. The problem comes when new *ad hoc* hypotheses about various physical, physiological, or psychological factors must be *repeatedly* added to explain the specific facts of NDEs.

Because these three hypotheses are the main explanations for the four NDE cases featured in Fischer's writings, one must assume that they formed the basis for Fischer's assertion that mainstream science could *in principle* someday explain NDEs. Furthermore, Fischer was confident about physicalist explanations of NDEs: "I am not convinced that there is *any* case in which it is obvious that an individual has acquired a piece of information in an NDE, and he could not have acquired it via a physical mechanism." (Fischer, 2019, p. 153). Further analysis of NDEs was unnecessary because his explanation of NDEs was general: "My analysis ... does not depend on the specific details of these particular cases, and I believe that it is generalizable to the full range of NDEs." (Fischer, 2020, p. 172).

We respectfully disagree: NDEs are anomalous experiences with common phenomenal elements and aftereffects that require *coherent* explanations. In our 2017 critique, we pointed out that Fischer and Mitchell-Yellin's (2016) explanations were based on *ad hoc* hypotheses and apply only in *specific cases* but not in other similar cases. We pointed out that this problem occurs when even a few *additional* NDE cases are examined. In our critique, we selected four additional NDEs taken from SDND. These were cases involving purely visual veridical perceptions, verified as accurate by a credible third party, such that none of the previous *ad hoc* hypotheses could be used to explain them. We found, however, that *nine additional ad hoc* hypotheses—many of which we consider highly

speculative—would likely be needed to explain the facts of these additional NDEs in physicalist terms (Mays & Mays, 2017a, pp. 74–77). Therefore, Fischer’s explanations were *not* generalizable to the full range of NDEs. (Examples of unusual NDE veridical perceptions that would require even further additional *ad hoc* hypotheses are given in the next paragraph.)

On even further examination, there are other problems with Fischer and Mitchell-Yellin’s (2016) analysis of NDE cases:

1. **They failed to explain *all* anomalous aspects of the NDE cases.** For example, they explained how Pam Reynolds later accurately recalled overhearing a *conversation* about her vein size that took place during the operation, because, according to Fischer, the conversation registered somewhere in her brain while under anesthesia. But they did not explain how she was able accurately to describe the *shape* of the bone saw that was used while she was anesthetized and her eyes were taped shut; or how she observed—accurately—that her body needed two shocks to restart her heart.
2. **They failed to *validate* their explanations of NDE cases with the facts of the case.** For example, the man with the dentures was able to recognize the male nurse who had removed his denture and placed it on a shelf of a cart, because, according to Fischer, he became familiar with the faces of the medical staff after his recovery. In fact, the man immediately recognized the male nurse on first seeing him a week later after his recovery from coma (SDND, case 3.7, p. 64).
3. **They failed to develop *general* explanations that can be applied to different cases with similar characteristics.** For example, in the Pam Reynolds case, they explained the ability to accurately recall *auditory* experiences while under anesthesia. But it would be a stretch to explain Al Sullivan’s ability to recall unusual *visual* experiences—the surgeon “flapping” his arms—with Sullivan under anesthesia, his eyes taped shut and his head behind a surgical drape (SDND, Case 1.5).

The repeated reliance on *ad hoc* hypotheses to explain NDEs indicates that the physicalist theory lacks coherence. One of the aims of science is to find models that will account for *as many observations as possible* within a *coherent framework*.

## 2. Promissory Physicalism or a Paradigm Shift

According to Thomas Kuhn (1970, pp. 84–85), a crisis in the prevailing paradigm of a scientific field occurs when numerous *anomalies* are uncovered that cannot be explained by the methods of the paradigm. The crisis can be resolved one of two ways: (a) the anomalous cases are labeled as a curiosity that can be explained away with cumbersome *ad hoc* explanations; a detailed explanation of the problem is set aside for a future generation with more developed tools. Or (b) candidates for a replacement paradigm that will resolve the crisis are explored. The new paradigm generally results in “a reconstruction that changes some of the field’s most elementary theoretical generalizations, as well as many of its paradigm methods and applications.” The new paradigm will apply decisively different modes of solving problems in the field—working within a *different conceptual framework*, like a change in visual Gestalt.

Fischer argued for the first method to explain NDEs, relying on *ad hoc* explanations to address anomalous NDE evidence, with the argument of “promissory physicalism” (Popper & Eccles, 1977, pp. 96–98): “The fact that we don’t yet have an adequate physical explanation [of NDEs] in terms of biochemistry does *not* entail that there are no prospects for such an explanation in the future. Neuroscience is still in its infancy ... and science marches on.” (Fischer, 2020, p. 178; see also Fischer, 2019, p. 154). Fischer proposes using *functional* explanations which “would still clearly be ... *physical* (or naturalistic) explanation[s].” (Fischer, 2020, p. 183).

We argue for the second method: to explore candidates to transform the current physicalist (naturalistic) theory—not to supplant it but to *extend* it in significant ways, leading *not* to supernaturalism but to an *extended* naturalism, one that includes *nonmaterial* entities, forces, and interactions. If a candidate theory holds up, the extended naturalism becomes a paradigm shift.

### 2.1 Fischer's Objections to Interactionist Dualism

Fischer challenged all non-physicalist theories of NDEs. In particular, he ridiculed dualist theories: they are impossible on their face. The NDE dualist needs to explain causality, that is, how does the nonmaterial mind interact with the brain? What is the two-way causal mechanism between the mind and the brain?

[E]mbracing a non-materialist view of the mind is indeed to leap into the murky waters of explaining how immaterial souls can be conscious and how souls—non-physical entities—can causally interact with our physical world. The mind has two-way causal interaction with our brains and bodies, but how is this possible, if the mind is non-physical? ... The assumptions and methods of “dualism,” which posits a non-physical mind, are obscure. To seek to explain the mind by invoking a soul or non-physical entities and processes may be to offer an explanation *obscurum per obscurius*. (Fischer, 2020, pp. 179)

We believe that a coherent dualist account of NDEs is far from obscure. There is sufficient evidence from NDE phenomena to support the idea that the mind is a separate aspect of the human being from the physical body. In particular, there is significant evidence from NDEs (a) that the mind separates from the physical body in an NDE, and (b) that the nonmaterial mind interacts causally in a two-way manner with physical processes and substances. In the following, we present a dualist theory based on this evidence.

## 3. Mind Entity Hypothesis

In earlier papers, we proposed that the human being consists of a nonmaterial “mind” that is spatially coextensive and usually intimately integrated with the physical body (Mays & Mays, 2008; 2011; 2015). J. Kenneth Arnette's *theory of essence* (1992, 1995, 1999) is an earlier exposition of this idea. The mind or “essence” of a person is an objective, autonomous entity, a nonmaterial “field of consciousness,” that interacts energetically with the brain's neural electrical activity to mediate all cognitive faculties. (“Nonmaterial” here means not consisting of material particles or atoms, and a “field” in this sense is a region of space that has specific properties.)

The mind entity is the *seat of consciousness* of the person, the subject in which phenomenal experience occurs. All cognitive faculties—perception, thinking, feelings, volition, memory, and self-awareness—reside in the nonmaterial mind, not in the brain. In ordinary in-body consciousness, neural electrical interaction between the brain and the mind is required for phenomenal experience and consciousness. The mind *ordinarily* is completely dependent on the brain's neural activity for consciousness. However, in an NDE, a person's mind entity can separate from and operate independent of the brain and body.

There are thus two states of consciousness: an “in-body” state, whereby the mind is dependent on the brain for normal cognitive functions, and an “out-of-body” state whereby the mind is separated and can function completely independent of the brain and body. In the separated state, there is no brain interaction; thus, visual, auditory, and other sensations occur *directly* in the mind without the physical sensory apparatus of the brain.

### 3.1 Evidence of Separation of the Mind From the Physical Body

More than 100 cases of verified paranormal phenomena associated with NDEs are presented in *The Self Does Not Die* (Rivas et al., 2016). These cases primarily include cases of veridical perception, that is, accurate perceptions during NDEs that were later verified by a third party. For example:

Critical care physician Laurin Bellg reported the case of Howard who suffered a cardiac arrest. He was resuscitated and was put on a ventilator. When he was finally weaned off the ventilator, he was able to talk and related a number of veridical details of the resuscitation—Dr. Bellg’s fumbling to get her stethoscope out of her pocket, her pens falling on the bed, and her specific comments when putting the intubation tube in. Then, Howard related, “I felt myself rising up through the ceiling and it was like I was going through the structure of the building. I could feel the different densities of passing through insulation. I saw wiring, some pipes and then I was in this other room. It looked like a hospital but ... it was very quiet ... like there was no one there. There were [people in beds that] looked like mannequins and they had IVs hooked up to them but they didn’t look real. In the center was an open area that looked like a collection of workstations with computers.” Right above the ICU is a nurse-training center with simulated hospital rooms, with medical mannequins on some of the beds, and in the center, a collection of workspaces with computers. Dr. Bellg and the attending nurse were surprised at the accuracy of his description and because the presence of the training center was not generally known, even by non-nursing staff. (SDND, Case 3.33).

Howard’s numerous veridical visual and auditory perceptions occurred during cardiac arrest or during his subsequent coma and were verified immediately after his ventilator was removed, in his first telling, including accurate details of objects—in the training center—which were clearly out of his physical line of sight. Notably, Howard reports feeling “the different densities of passing through insulation.” NDErs frequently report easily floating above their physical body and easily moving through solid objects like walls and ceilings, sometimes feeling a slight resistance or a change in density in the process (Mays & Mays, 2008, pp. 21, 33).

NDErs also frequently report that the quality of their visual perceptions is different when out-of-body—commonly described as “360° spherical vision” or “vision from everywhere”—that is, the ability to see with veridical accuracy *simultaneously* in all directions including from above and below and *through* solid objects (Jourdan & Smythies, 2019; Ring & Cooper, 1997). These unusual visual abilities indicate that the perceptions are not mediated by physical sensory organs.

The unusual visual abilities, together with veridical perceptions by NDErs outside the physical line of sight or while brain function is compromised, strongly suggest the separation of the mind from the body.

Fischer proposed a series of *ad hoc* hypotheses to explain *selected aspects* of only *four* NDEs. In contrast, the mind entity hypothesis explains *all* aspects of *all* NDEs, that is, the nonmaterial mind separates from the body, perceives the physical surroundings and the thoughts of others, has encounters with deceased persons, forms vivid memories of these experiences, and returns to the body. The phenomenal experiences are then recalled and verified as accurate by a third party.

### 3.2 Evidence of the Objective Existence of the Separate Mind Entity

In addition to the veridical phenomenal evidence reported by NDErs, there are several kinds of evidence for the *objective existence* of the out-of-body mind entity. The most important evidence is objective observations of the NDEr by others during the NDE—in an “apparitional” NDE—of which there seven cases documented in SDND (chapter 7). The NDEr, while out of body, visits and communicates in some way with a living person, and both accounts of the encounter are subsequently verified to be consistent with one another. One of these cases is Olga Gearhardt’s:

In 1989, Olga underwent heart transplant surgery. All of her family came to the hospital to await the outcome, except her son-in-law who could not be at the hospital. The heart transplant was successful, but at 2:15 a.m., her new heart stopped beating, and it took 4 hours to resuscitate her heart and then longer still for her to recover consciousness. The son-in-law, who was sleeping at home, awoke at exactly 2:15 a.m., and Olga was standing at his bedside.

Thinking that the surgery had been postponed, he asked her how she was. She replied, “I am fine. I’m going to be all right. There’s nothing for any of you to worry about.” She asked him to tell her daughter (his wife) and then she disappeared. The son-in-law wrote down the time and exactly what was said, and he went back to sleep. When Olga regained consciousness, her first words were, “Did you get *the* message?” Olga later reported that she had left her body and had tried but was unable to communicate with the family members who were all asleep in the hospital waiting room, so she went to the son-in-law, with whom she succeeded in communicating. NDE researchers Melvin Morse and Paul Perry thoroughly verified these details, including the note the son-in-law had scribbled. (SDND, Case 7.3).

Apparitional NDEs and other kinds of evidence support the view that the mind is an objectively real entity and not the result of the NDEr’s neurophysiological processes. In several apparitional NDEs, people perceived the NDEr as physically present, as with Olga Gearhardt’s son-in-law.

### 3.3 Evidence of Interaction Between the Mind Entity and Physical Processes

A major objection Fischer had to a nonmaterial mind is the need to explain how the mind could *causally interact* with the physical brain. First of all, Fischer asked how a nonmaterial entity could interact with *anything* physical.

In fact, there is substantial evidence of the interaction of the separate mind entity with physical processes. The fact that NDErs report veridical perceptions of the physical realm, especially at a distance from the physical body, demonstrates that there are numerous forms of interaction between the out-of-body field of consciousness and physical processes and energies, such as light, sound vibrations, solid surfaces, and solid objects.

These subtle receptive interactions give rise to subjective phenomenal sensations. The NDEr’s “sight” interacts with *light* to provide veridical perceptions with normal colors. For some NDErs, visual perception is dependent on the ambient light. The NDEr’s “hearing” interacts with *sound vibrations* from heart monitors, fluorescent lights, and human speech to provide veridical auditory perceptions. Some NDErs report that they “bob” against the surface of the ceiling or feel the support of the hospital roof, and “touch” and feel *solid objects*. (Mays & Mays, 2008, pp. 21, 33).

As described earlier, some NDErs report feeling a change in density or slight resistance when moving through solid objects, like walls, which implies a subtle interaction with *solid matter*. This sense of subtle resistance indicates the *exertion of a force*—from Newton’s third law of motion, for every action there is an equal and opposite reaction. So the NDEr’s experience of resistance indicates that there is a *new physical force* of interaction occurring between the nonmaterial mind and solid matter. The force is very weak but nonetheless present.

All of these phenomena of physical interaction involve interacting with electromagnetic radiation (light, in visible-range frequencies) and atoms or molecules (molecules in the air, in fluids, and in solids). NDErs report phenomenal sensations of sight, hearing, touch, taste, and smell. The new physical force of interaction is probably involved in each of these types of interaction.

Finally, some NDErs report interacting with another person’s body during their NDE. The interactions can include apparent “sensing” of the neural electrical activity in the other person’s body. For example, when a cardiac arrest patient passed her hand through Raymond Moody’s arm, she felt it had a “very rarefied gelatin” consistency, with an *electric current* running through it (Moody, 1988, pp. 8–9).

The interactions also appear to induce neural activity in the other person, such that the interaction can be felt subtly by the other person. For example, in the hospital during his NDE as a seven-year-old, Jerry Casebolt playfully tickled another patient’s nose—a woman with dementia—

touching her just once and she sneezed. He repeated this two more times (Casebolt, personal communication, August 3, 2008; Corcoran, 1996, p. 83).

These two types of interactions between the NDEr's nonmaterial "body" with another person's body are evidence of interaction *specifically* with neural structures, inducing both phenomenal sensations in the NDEr and neural activations in the other person. They support the idea that the mind can interact *specifically* with neural structures in the brain.

### 3.4 How the Mind Entity Interacts With the Brain

Fischer also required that the nonmaterial mind must have *two-way causal interactions* with the brain. In our view, there are two modes of mind-brain interaction: (a) *brain-to-mind*: the brain induces phenomenal sensations in the mind via neural activations, for example, in sensory perception, and (b) *mind-to-brain*: the mind impresses phenomenal thoughts (concepts, images, plans, daydreams) on specific regions of the brain causing neural activations which bring the thoughts to awareness. Note that in *both* cases, neural activations are necessary to bring mental content to awareness.

Fischer would also like a description of the mind-brain mechanisms—how such two-way interactions could actually occur. In the mind entity theory, the interface between the nonmaterial mind and the brain is in the gray matter—the outermost 2–4 mm portion of the neocortex. The neurons in the gray matter are arranged in 6 layers. The mind entity interfaces with the *apical dendrites*, the dendritic structures from *pyramidal neurons* in layers 2, 3 and 5 that emerge from the apex of the cell body and project vertically to the surface of the cortex with complex branching. The apical dendrites have numerous tiny protrusions called *dendritic spines* which can form synaptic connections with other neurons.

We propose that the mind interfaces with neocortical apical dendrites—including in cortical sulci—in two ways. First, the *brain-to-mind interface* occurs when neural activations occur, for example in sensory neural areas. When a neuron "fires," its action potential propagates backwards and upwards from the cell body throughout the dendritic arbor, as well as down the axon (Smith et al., 2013). When a large number of neurons fire together in a brain region, these "backward propagated" pulse-like activations are *detected* by the mind, ultimately bringing the sensation to awareness.

Secondly, the *mind-to-brain interface* occurs when the mind *induces neural activations* in a brain region to *impress* a specific mental content on it, for example a concept or image from the mind. The back-propagated *induced* activations are then detected by the mind—similar to the sensory activations described above—ultimately bringing the mind's mental content to awareness. *When united with the brain and body*, the mind entity cannot become aware of its own mental content without these neural activations.

We propose that the mind can induce neural activations by altering the molecular configuration of ion channels in the dendritic spines. When these ion channels open, an action potential is triggered. With a sufficient number of neurons firing together in the brain region, the mental content can be detected by the mind and ultimately comes to awareness. Specific mental content can come to awareness in the mind only when it is "reflected" in neural activations in a specific region of the brain. Specific patterns of activation in a given brain region, for example the fusiform face area, signify specific perceptual content (a specific face) or mental content (the meaning of a word).

This view of mind-brain interactions is consistent with the close correlation of all in-body mental states and brain function. When brain structures are damaged or impaired with alcohol or drugs, both the brain-to-mind and mind-to-brain interfaces become partially or totally impaired because they both are dependent on neural activations to function.

### 3.5 Addressing the "Causal Pairing Problem"

An important objection to interactionist dualism is the “pairing problem” (Kim, 2011, pp. 50–56)—causation between a nonmaterial mind existing outside physical space and a physical object (like a brain) makes sense only if the causal interaction occurs in spatial relation to the physical object. The mind-entity theory holds that a nonmaterial mind is an extended three-dimensional object in physical space-time which can merge coextensively and pair with a specific physical brain and body. The mind and brain are located in intimate spatial relation to one another and exert direct causal interaction with each other. The mind entity theory thus addresses the objections posed by the “pairing problem” (see also Arnette, 1995; 1999).

#### 4. Explanatory Power

Fischer preferred to rely on *ad hoc* explanations to address the anomalous aspects of NDEs and to wait for progress in neuroscience—both through technological advances and theory—to fully explain NDEs. We think more is at stake than an explanation of NDEs.

A central tenet of the mind entity hypothesis is that the essence of the human being is an *autonomous nonmaterial conscious entity*. The human being is essentially a nonmaterial *spiritual being* united with a physical body. This tenet is a radical departure from most explanations of consciousness proposed by physicalists and philosophers who are stuck on the “hard problem” of explaining subjective phenomenal experience. It is also a radical departure from most explanations of consciousness proposed by NDE researchers and theorists—as some form of “nonlocal” consciousness.

Nearly all scientists and philosophers—Fischer included—have dismissed dualism out of hand for the same reason Fischer gave, it is a “leap into the murky waters” of explaining how nonmaterial entities can causally interact with the physical world.

We believe the mind entity hypothesis answers Fischer’s challenge with a plausible explanation and specific neurological mechanisms. We are prepared to show—though not here—how this model can be tested and can provide more cogent explanations of neurological processes related to conscious experience than present neuroscience can do.

What we can say here is that the mind entity hypothesis, based on the existence of a nonmaterial conscious entity united with the brain, explains a number of problems in philosophy and neuroscience (see also Mays & Mays, 2015, pp. 141–143):

1. **The hard problem of consciousness**, that is, how neural activity in brain neurons turns into subjective phenomenal experience. In the present view, the mind *is* the seat of consciousness and all in-body phenomenal experience results from the interaction of neural activity with the mind.
2. **The binding problem**, that is, how the qualities of phenomenal experience seem to come together in a complete, seamless unity of experience from different, widely separated regions of the brain. In the present theory, phenomenal experience is unified because the mind, as the seat of consciousness, is unitary and the disparate elements of experience are unified within the mind as a single Gestalt.
3. **The problem of agency or reflexivity**, that is, the sense of self-awareness and knowing that one is the agent of one’s actions, feelings, and thoughts (Fischer, 2020, p. 182). In the present theory, the sense of agency *is* one’s sense of being an autonomous mind entity. The mind initiates volitional actions by initiating neural activity in the brain and becomes aware of the decision by detecting the neural activity.

We believe that the mind-entity theory addresses all aspects of all NDEs, as well as provides the basis for understanding the operation of ordinary consciousness in the physical body.

#### 5. Extending Physicalist Naturalism

With competitive scientific paradigms, one needs to compare the theories against the existing phenomenological facts, including the anomalies—which theory fits the facts *better*. Still, a paradigm shift requires a *change of conceptual framework*. By definition, the competing paradigms are *incommensurable*, that is, they cannot be measured by each other’s standards. The entire conceptual web of the old paradigm must be shifted or reformulated in terms of the new paradigm and then “laid down again on nature whole.” (Kuhn, 1970, p. 149). This means that the new paradigm must explain (ultimately all of) the existing facts of the field in its own terms. The mind entity theory requires a significant *Gestalt shift*, most notably in neuroscience and physics.

### 5.1 Implications for Neuroscience

Current neuroscience must be reformulated, for example, in the following ways:

- Neural activations are currently considered *calculations* on neural *representations* of mental content *encoded* in neural structures. In the present theory, all mental content and processing is carried in the nonmaterial mind. There are no neural representations of mental content. The mental content in the mind is impressed on a brain region; the neural activations in that region bring the content to awareness.
- Both episodic and semantic memory are currently considered to be *encoded* as neural *representations* in the brain, in the hippocampus or globally in the cortex, respectively. In the present theory, all memories are formed in the mind and are *accessible* by impressing specific content, through intuition, on the appropriate brain region, for example, a specific life event or the meaning of a word. *Long-term potentiation* of hippocampal neural connections indicate *common pathways* in episodic memory *formation* and memory *recall*.

### 5.2 Implications for Physics

Current physics must be reformulated to account for the following new phenomenological facts:

- *An extra spatial dimension*: As described above, NDErs frequently report unusual visual abilities—“360° spherical vision” and “vision from everywhere.” Several researchers have proposed that this exceptional ability implies there is an *additional spatial dimension* (Arnette, 1992; Brumblay, 2003; Jourdan, 2011/2017; Jourdan & Smythies, 2019). Because NDEr veridical perceptions occur “simultaneously in all directions,” the *5<sup>th</sup> dimension* must encompass the other dimensions (3 of space and 1 of time). The nature of this *5<sup>th</sup> dimension* has relevance to physicists who are considering an extra spatial dimension to explain the weakness of gravity relative to the other fundamental forces (Randall, 2006).
- *A new physical force* between the out-of-body, nonmaterial mind entity and solid physical objects: This force accounts for the subtle interaction NDErs experience when moving through solid matter, generally described as a resistance or increase in density. This force is likely a universal force between entities existing in the *5<sup>th</sup> dimension* and matter.

### 5.3 Extending the Existing Physicalist Paradigm

Fischer equates “naturalism” with physicalism and for Fischer any departure from physicalist explanations of NDEs leads directly to supernaturalism. *On the contrary*, the mind entity hypothesis is hardly a leap into supernaturalism. The insights derived from NDE phenomena lead to a generalized, coherent explanation of NDEs and permit the development of a theory that has greater explanatory power with respect to consciousness, memory, and agency. As we have hopefully demonstrated above, the insights from this theory provide a new conceptual framework that can lead to breakthroughs in neuroscience, physics, and other fields, thereby *extending* the current naturalism to include *nonmaterial* entities, forces, and interactions.



The mind entity—the nonmaterial aspect of the human being that interfaces with the physical brain and body—can thus come to be accepted as “real” in Fischer’s *second* sense, that is, representing external reality *accurately*. These higher, nonmaterial realities may ultimately be shown to be a more fundamental aspect of physical reality and, indeed, the basis of all physical reality.

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