

Embodiment and Entangled Subjectivity: A Study of Robin Cook's *Coma*, Priscille Sibley's *The Promise of Stardust* and Alexander Beliaev's *Professor Dowell's Head*

Manali Karmakar 1 D · Avishek Parui 1

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Abstract The essay examines Robin Cook's (1977) *Coma* and Priscille Sibley's (2013) *The Promise of Stardust* that dramatize the reified and disposable status of the brain-dead patients who are classified as nonpersons. The essay argues that the man-machine entanglement as depicted in the novels constructs a *deterritorialized* and entangled form of subjectivity that intervenes in the dominant biomedical understanding of personhood and agency that we notionally associate with a conscious mind. The essay concludes its arguments by discussing Alexander Beliaev's (1925) *Professor Dowell's Head* which depicts human subjectivity as an essentially embodied and distributive phenomenon and interrogates the Cartesian mind body dualism embedded in the dominant biomedical narratives.

Keywords Brain-dead · Personhood · Agency · *Deterritorialized* and entangled subjectivity

Introduction

In his 2005, dystopian novel *Never Let Me Go*, Kazuo Ishiguro speculates on the ethical issues of organ transplantation and human cloning, while also dramatizing the anxiety associated with the brain-dead phenomenon accepted as the extended ontology of death by the Ad Hoc Committee of the Harvard Medical School in the year 1968. In Ishiguro's novel, the human clone Kathy narrates the existential anxieties of Tommy and other clones who are waiting for their fourth organ donation after the completion of which they will be medically declared as dead. While awaiting his fourth donation, Tommy often shares his suspicion with Kathy about

Manali Karmakar mkarmakar68@gmail.com

> Avishek Parui a.parui@iitg.ernet.in

Department of Humanities and Social Sciences, Indian Institute of Technology Guwahati, Guwahati, India



the medical diagnosis of a patient as dead. Tommy states, "You know why it is, Kath, why everyone worries so much about the fourth? It's because they're not sure they're really complete. If you knew for certain you'd complete, it would be easier. But they never tell us for sure" (273).² Tommy states that the anxiety and ambiguity associated with the brain-dead phenomenon³ is further augmented because of the medical practitioners' inability to state definitely that the patient diagnosed with irreversible coma is dead.⁴ Kathy throws light on the ambiguous nature of the brain-dead patients who are kept on ventilator for organ retrieval thus:

But Tommy would have known I had nothing to back up my words. He'd have known, too, he was raising questions to which even the doctors had no certain answers. You'll have heard the same talk. How maybe, after the fourth donation, even if you've technically completed, you're still conscious in some sort of way; how then you find there are more donations, plenty of them, on the other side of that line...how there's nothing to do except watch your remaining donations until they switch you off. (274).

The current culture of organ transplantation has problematized our shared notion of life and death and has created an immediate need to medico-legally distinguish a section of humans who are merely corporeally alive from those who are acknowledged as members of a politically agentic community. Organ transplantation practice has stimulated a range of bioethical issues about the ambiguous nature of the brain-dead phenomenon, entangled and hybridized forms of human subjectivity, and the notions of personhood, and embodiment. American philosopher H. Tristram Engelhardth Jr. in a 1989 article on the bioethical issues of organ transplantation and brain-dead phenomenon states:

Since the 1960s there have been especially heated debates about how to distinguish between human biological and human personal life, and about the force and significance of the distinction. These were in part spurred by development of transplantation, which forcefully brought across the need to distinguish those forms of human life that persists in organs, tissues, and cells from those who are full bearers of rights and duties. (1)

The biotechnologically mediated body of the brain-dead patient has fueled debates about the nature and ontology of human subjectivity and personhood in biomedical cultures where plasticity and plurality have increasingly metonymized the centrality of the organically original self. Roger Luckhurst argues that the brain-dead patient may be conceived as a bioengineered being that is invented "inside a brand new technical assemblage, which is called the intensive care unit" (2015, 87). The brain-dead phenomenon may be considered as an "epistemological construction" that was created by the legislative body and the biomedical industries with an aim to augment the supply of organs from the living cadavers (Sharp 2006, 15). The cadaveric organ donors who are corporeally alive but medico-legally considered as dead are perceived as mere corpses that are classified as consumable biomedical commodities. Robin Cook's (1977) medical thriller *Coma* and Priscille Sibley's (2013) *The Promise of Stardust* capture the anxiety associated with the ambiguous nature of the brain-dead patients who are sustained on ventilator for organ retrieval.

The first three sections of the essay will focus on Cook's medical thriller *Coma* and Sibley's *The Promise of Stardust* that dramatize how the liminal status of the brain-dead patients problematizes our normative understanding of life and death. The reified status of brain-dead patients as depicted in the fictional narratives of Cook and Sibley trigger ethical and emotional anxieties that correlate to contemporary bioethical issues about the medico-legal status of patients in a state of irreversible coma who are conceived to be outside the ontology



of personhood. This essay suggests that Cook's and Sibley's novels are not mere fictional representations of the brain-dead patients who are biomedically classified as disposable entities. The essay would like to argue that the man-machine entanglement as portrayed in the novels constructs a *deterritorialized*⁵ and entangled form of subjectivity that intervenes in the dominant biomedical understanding of personhood and agency that we notionally associate with a conscious mind. The study draws on and extends Dawn Goodwin's (2008) concept of agency discussed in an article entitled "Refashioning Bodies, Reshaping Agency." Goodwin's study analyzes the notion of agency and subjectivity in the context of patients who are anesthetized during surgery, but in this essay Goodwin's explanation of agency is extended for the purpose of analyzing the order of agency exhibited by the brain-dead patients who are sustained on ventilator for indefinite period. The essay concludes its argument by discussing Alexander Beliaev's (1925) *Professor Dowell's Head* which depicts human subjectivity as an essentially embodied and distributive phenomenon and interrogates the Cartesian mind body dualism embedded in the dominant biomedical narratives.

Contested and ambiguous nature of brain-dead phenomenon

Robin Cook's *Coma* begins as Nancy Greenly, who is admitted in the Boston Memorial Hospital for dilation and curettage—a routine gynecological procedure—suffers anesthetic complication during her surgery. During the surgical procedure, her brain does not receive oxygen for a long time leading to the damage of her cerebral cortex. Hence, she is medically declared brain dead. Although the damage to the cortical part of Nancy's brain leads to an irreversible coma, the doctors are able to sustain her cardiopulmonary mechanism with the help of the biotechnological apparatuses that enable the normative functioning of the vital organs of her body. The narrator in Cook's *Coma*, through Susan Wheeler, a medical student who joins Boston Memorial Hospital as an intern, narrates the existential and emotional anxieties of an individual observing a brain-dead patient thus:

Nancy Greenly's eyes were only half closed and the lower edges of her blue iris were visible. Her face was a marble white, which contrasted sharply with the sable brown of her hair. Her lips were dried and cracked, her mouth held open with a plastic mouthpiece so she wouldn't bite the endotracheal tube [...] The harshness of the image of the previously normal woman made her tremble with undirected emotional pain [...] Susan lifted one of Nancy Greenly's hands. It was surprisingly cold and limp. Was she dead or alive? The thought crossed Susan's mind. But there directly above was the cardiac monitor with its reassuring electronic blip tracing excitedly its pattern. (54)

Susan as a medical student is in the early stage of her medical career and hence, is not yet able to imbibe the notion of the human body as a mechanic entity. Instead, she establishes an empathic relationship with the human element of the twenty-three-year-old Nancy who is in the state of irreversible coma since the day of her surgery. Susan is subsequently moved by the medical condition of Nancy lying in front of her in an immobile status and is not able to understand whether the motionless patient who is metaphorically denoted as a "delicate piece of porcelain" is dead or alive (54). Susan feels that she is looking at a dead body. The narrator explains that for a moment Susan "fought to discern the motionless figure in the bed in the corner," but the rhythmical beep of the cardiac monitor and to-and-fro hissing sound of the respiratory machine reassures her that the body is alive, thus bringing the binary between life



and death in a complex and contingent loop where the organic and inorganic orders are endlessly enmeshed (51).

The man-machine entanglement as dramatized in *Coma* problematizes Susan's normative understanding of the life and death. Cook's *Coma* bears rich resonance with the contemporary research in the domains of bioethics and medical anthropology which examine the liminality between life and death informed and influenced by medical machines. The ambivalent state of Susan Wheeler as dramatized in *Coma* correlates to Michael Rassin, Miri Lowentahl, and Dina Silner's (2005) case study of the phenomenal experiences of people observing brain-dead patients. The Rassin et al. study has foregrounded the fact that although medico-legally brain death is accepted as a criterion for diagnosing a patient as dead, a large group of people including workers in the healthcare system are reluctant to accept a patient with a beating heart as dead.

Priscille Sibley's *The Promise of Stardust* depicts the ambiguous nature of the brain-dead phenomenon by featuring the liminal status of Elle Lenore who was eight weeks pregnant at the time she was medically declared as brain dead. Medico-legally Elle is considered as dead and hence, is conceived to be outside the normative ontology of personhood. She is not acknowledged as an agentic self who can be accorded socio-political rights that are granted to the members of a politically agentic community. Her liminal status triggers questions about bioethical issues such as: How is it possible to disassociate the maternal life from the life of the embryonic body? Elle's husband Dr. Matthew struggles to accept his wife who is corporeally alive as dead. On the one hand, Dr. Matthew considers himself a fool who addresses the biotechnologically mediated unconscious body as his wife, and on the other, he is enraged when his mother considers Elle as a reified entity and his human anguish is expressed thus: "My heart was pounding in my chest so hard I was seeing spots. She is not an incubator. She is baby's mother" (48). He needs to be persistently reminded of the fact that Elle as a person is not alive but that it is the machine keeping the body alive, thus bringing the man-machine interface into an intersubjective entanglement— one that triggers ambivalence as well as emotional rejection of reified biomedical knowledge. At a more semantic level, the episode thus foregrounds the epistemological divide between hard medical data and human emotional understanding. In Sibley's The Promise of Stardust, Dr. Matthew's ambivalence is articulated thus:

I couldn't focus or make sense of anything. Cognitive dissonance had taken over. I kept whispering to and begging her to wake up. I knew what was happening. I could not accept it even though every prop tethered me to this unreality. One minute I was looking at Elle's intracranial pressure monitor, and the next my mind shot into fantastical asides like-fishbowls. (22)

Like Susan Wheeler in Cook's *Coma*, Dr. Matthew states that the biotechnological apparatuses connected to Elle problematize his normative understanding of life and death. He states that the constant beeping sound of the intracranial pressure monitor and the respiring and pulsating (biotechnologically mediated) body of Elle creates an illusion that she is alive. Dr. Matthew's perplexed state corroborates the trauma theorist Roger Luckhurst's (2015) argument that brain-dead patients appear to be palpably alive on an EEG monitor (echoencephalograph) even if the signs are created by intensive care unit artifacts. Drawing on Michael Nair-Collins and Franklin G. Miller (2017), it may be argued that the technologically mediated body of the brain-dead patient problematizes the binary between appearance



and reality. Nair-Collin and Miller argue that "artificial ventilator creates ambiguity in both the appearance and the vital status" of the brain-dead patient (2). They further explain that the ambiguous status of the brain-dead patient arises from the fact that although the patient is biomedically declared as dead, the patient does not look like a corpse. The artificially maintained body of the brain-dead patient continues to exhibit signs of life.

Biomedical practitioners argue that the biotechnological apparatuses that are connected to the patient's body mask the reality of death. In reality, the brain-dead patient as a biological organism has ceased to function normatively. The ambivalent situation of Susan and Dr. Matthew as dramatized in the novels throws light on the conflict between the biomedical explanation of brain death and the phenomenal and empathic experience of the observer observing a patient in a state of irreversible coma to whom the patient appears to be somatically alive. The cognitive dissonance experienced by the fictional characters in the narratives of Cook and Sibley correspond to Lesley Sharp's (2006) anthropological study of the brain-dead patients who are biomedically classified as cadaveric organ donors. Sharp states:

By medicolegal definition these donors are dead: whereas the ventilated brain-dead body appears to be alive to lay parties and health professions alike, each breathe taken is technologically dependent. The bodies of such donors maintain their natural coloring and remain warm to the touch, and they may even manifest what are understood as involuntary movements that result from residual nervous system activity. Such contradictions render them inherently strange. (17).

The new ontology of death has created an interval between the medico-legal definition of death that is termed as brain death and the biological death. The dramatized blurring of the borderlines between life and death in these literary works of Cook and Sibley offer a fictional engagement with contemporary issues of biomedicalization of death discussed by Willard Gaylin (1974) in article entitled "Harvesting the Death." Gaylin states that a few decades back there was little ambivalence in a physician's mind in terms of diagnosing a person as dead. In such medical culture, "the fact of death was sufficient. The difference between life and death was an infinite chasm breached in an infinitesimal moment. Life and death were ultimate self-evident opposites" (23). Advancement in biotechnological apparatuses like artificial ventilation has led to the commodification of life and commercialization of death. It is now possible to maintain the visceral functions of the body despite the absolute absence of the cortical activities that notionally qualifies a human as a person. The living cadaver who is "respiring, pulsating, evacuating, excreting" and is in constant need of "nursing, dietary, and general grooming attention" redefines our normative notions of life and death (26).

In a similar vein, the French historian Philippe Aries (1981) explains how the notion of death has undergone a transformation since late nineteenth century. Aries states that during World War II there was a complete biomedicalization of death itself. In the labyrinth of advanced surgical and biotechnological equipment, competent medical practitioners, and pharmaceutical laboratories, death as a phenomenon has been reconfigured. Advancement in medical technologies has made it possible to resuscitate a patient's body which suffers a complete loss of cortical activities. In the era of biotechnology, death is no longer considered as a natural and instant phenomenon. Death in the era of biomedicine has become technocratic. It is regulated by the medical machines—like the ventilator—to which the patient is kept connected. Aries describes the complexities thus:



The time of death has been both lengthened and subdivided [...] the old signs, such as cessation of heart beat or respiration are no longer sufficient. They have been replaced by the measurement of cerebral activity, the electroencephalogram. The time of death can be lengthened to suit the doctors. The doctors cannot eliminate death, but he can control its duration from a few hours it was, to several days, weeks, and months, or even years. It has become possible to delay the fatal moment. (1451-1452).

Fictional characters like Nancy and Elle as dramatized in Cook and Sibley's novels are not somatically or corporeally dead. Hence, their liminal status evokes anxiety and ambivalence among the bioethicists, lawmakers and layman who are not able to define the moral status of the individuals classified as living cadavers. Both Nancy and Elle continue to live on a ventilator for months, and the vital organs of their bodies continue to function normatively. The patients' bodies undergo all the biological changes that we associate with a living being. The liminal existence of brain-dead patients who are metaphorically considered as inanimate matter in spite of the fact that their bodies exhibit signs of life trigger ontological and existential questions like—Is the brain-dead patient really dead? What is the moral status of a liminal being like a brain-dead patient who is medico-legally classified as a disposable entity?

Brain-dead patients as non-persons

Neuroscientist Antonio R. Damasio (2003) argues that although research in neurobiology has proven that mind and brain are inseparable, the acceptance of the mind and brain as an inseparable phenomenon has not entirely done away with the dualistic understanding of the human self in the popular imagination as well as in the common medical discourse. Damasio examines how modern medical practices have invented a split between the brain and the body. He further states, "now the split separates the brain and the body proper and the explanation of how mind and the brain are related becomes more difficult when brain as a part of the body is divorced from the body proper" (190). The mind-body dualism does not allow us to conceive the relevance of the body in the construction of the human subjectivity. In this context, one can also refer to Damasio's (1999) "How the Brain Creates the Mind" where he argues that the continuation of the separation of the mind and the body is related to our limited understanding of the neurobiological patterns of the human body. There is discrimination between the "good understanding of the mind we achieved through the centuries of introspection and efforts of the cognitive science versus the incomplete neural specification we have achieved through the efforts of neuroscience" (115). An analogy can be drawn between Damasio's analysis of the split between the brain and body that is embedded in the narratives of biomedicine and the dramatization of the mind-body dualism in Cook's novel Coma.

The equivalence of a brain-dead patient with inanimate matter is captured in *Coma* in the conversation between Dr. Mark Bellows and Susan who is agitated to observe how the medical practitioners are dehumanizing Nancy by considering her as an inanimate entity. The narrator depicts Susan's agitation thus:

Once again, she was faced with the fact that Bellows and probably the entire crew were not thinking of Nancy Greenly as a person. The patient seemed more like the part of a complicated game, like the relationship between the football and the teams at play. The football was important only as an object to advance the position and advantage of one of the teams. Nancy Greenly has become a technical challenge, a game to be played. (92).



Dr. Bellows is portrayed as an embodiment of the Western hegemonic biomedical knowledge, is oblivious to the human element of Nancy. He is engrossed in quantifying the amount of intake and output the body has produced and in managing the fluid balance of the patient so that Nancy's body continues to perform normatively. Bellows draws Susan's attention to the immobile state of Nancy and says, "if her squash is gone, I mean wiped out, then we may as well get the kidneys for someone else...Let's face it; it means brain is infracted, dead, and there is no way to bring it back" (56). As a medical practitioner, he strongly believes that it is a waste of time treating a brain-dead patient, but he is not able to turn off the ventilator because the hospital authority has not given the permission, thus capturing the interface of the medical and moral dilemma in Cook's novel. The narrator describes the dehumanized state of Nancy by metaphorically denoting her as a football, a passive agency-less instrument of play, one that becomes an object of operation for a team of doctors to achieve their experimental goal.

The administrative staff of the Jefferson Institute, Michelle, reiterates Dr. Bellows statement. Michelle explains to Susan that the brain-dead patients "were people; now they're brain stem preparations. Modern medicine and medical technology have advanced to the point where these organisms can be kept alive, sometimes indefinitely" (289). Michelle tells Susan that the brain-dead patients who are monitored in the institute are not known by their names; rather they are codified so that they can be constantly regulated and monitored by the computers to which they are connected. Jefferson Institute in Cook's novel is described as having been constructed with the support of the Department of Health, Education, and Welfare in 1974, thus dramatizing the state apparatuses investment in experiments in biomedicine. It may be considered as a bioemporium in which the living cadavers or the neomorts are harvested so that they can be used for organ procurement for a capitalist consumerist clientele. The fictional representation of the "vast hanger of the brain-dead patients who are kept in a state of literary suspended animation" throws light on the reified status of the brain-dead patients who are considered to be outside the legal framework of personhood (Luckhurst 2015, 92). An analogy may be drawn between the reified status of the brain-dead patients who are kept on ventilator in Cook's Coma and Sharp's study of the brain-dead patients. In Beyond Brain Death, Michael Potts, Paul A. Byrne, and Richard G. Nilges (2000) argue that the acceptance of brain death as a criterion for medico-legally declaring a patient as dead has excluded a section of non-sentient beings from the domain of human moral community thereby raising bioethical questions about the social worth of the brain-dead patients. The question of agency is accentuated here, as such brain-dead beings are further commodified biomedically as potential organ donors and subsequently converted into human organic trash, thus highlighting the biocapitalist quality of the modern medical industry that increasingly appropriates a supply-demand discourse, converting patients into buyers, clients, and consumers.

In An Ontology of Trash, Greg Kennedy (2007) states that in the throwaway society, disposability is not merely a feature of the commercial goods but has also become a way of life. Kennedy argues that the disposable entities are "apriori trash" (142). All entities that are classified as disposable are subsequently converted into trash, and the dispensable status of the brain-dead patients foregrounds how in the current consumerist capitalist society the concept of trash is amply applied to a section of humans who are not conceived as persons. An analogy may be drawn between reified and disposable status of the brain-dead patients who are not acknowledged as persons in Cook's Coma and Lesley Sharp's study of the brain-dead patients. In Bodies, Commodities, and Biotechnologies, Sharp (2007) argues that the horror of brain death is that "it robs us of our free will or agency and it dehumanizes us by rapidly transforming us into cyborg or



bodies devoid of personhood that are nevertheless dependent on machines for survival" (10). Like Damasio, Sharp argues that the new ontology of death reaffirms the Cartesian notion that the essence of humanness is restricted to the conscious mind, and the body is conceptualized as an inanimate matter. She further argues that the brain-dead patient who is kept on ventilator is considered as a "human shell, a body that functions physiologically but no longer thinks or senses the surrounding world" (17). The new ontology of death promotes the notion of the body as a soulless mortal machine capable of mechanic explanation and manipulation.

Deterritorialized and entangled subjectivity

The concept of personhood has been of central importance in the history of moral philosophy and rationality as well as in current studies of embodiment and cognition. The term, person, is entwined with the cognitive and metacognitive abilities like self-reflexivity that enables an individual to act rationally and to be morally responsible for his/her action. In the seventeenth century, the British Empiricist John Locke (1690) in *An Essay Concerning Human Understanding* stated that "a person constitutes a thinking, intelligent being that has a reflection and can consider itself as itself, the same thinking thing in different times and places" [sic] (211). More recently Daniel C. Dennett in his 1976 article entitled "Conditions of Personhood" draws on John Locke's concept of personhood in order to offer six themes on the basis of which the concept of personhood can be analyzed. He stated that an individual who: (a) is conscious (b) has the ability to act rationally (c) is capable of communicating verbally (d) has the ability to reciprocate to other's thoughts and feelings (e) is self-reflexive of his/her existence and (f) is acknowledged as a member of its community is considered as a person.

American philosopher Tom L. Beauchamp (1999) states that although consciousness is being considered as the criterion for being recognized as a person who can enjoy moral rights, the criterion has failed to address the issues of humans like the brain-dead patients who are not incorporated within the framework of moral personhood. Beauchamp argues that we are obliged to accord some rights and moral protection to the brain-dead patients because like any living organism, they too feel pleasure, pain, and undergo suffering. Beauchamp further states, "some creatures have moral standing even though they do not possess even a single cognitive and moral capacity" (np).⁸ In a similar vein, Margrit Shildrick (2008) argues that in the current culture of biotechnology there is an urgent need to revise the theoretical approaches of biomedicine by drawing on philosophical traditions like phenomenology, feminism, and post-structuralism that critique and question the ontology of "autonomous, invulnerable, and sovereign subject" upheld by traditional bioethicists (32).⁹

In *Transpositions*, the critical theorist Rosi Braidotti (2006) deconstructs the liberal humanist notion of personhood and throws light on the paradoxical situation of the human beings in the age of human genetic engineering. She examines how, on the one hand, we have embraced the evolving biotechnological innovation that has reconfigured our ontological understanding of humanness, and on the other hand, we are attempting to offer a metaphysical explanation of being a human by relying on the classical humanist notions of agency and autonomy that are embedded in an "immutable and unmovable" concept of human nature (2). Braidotti argues:

The much-celebrated phenomenon of globalization and its technologies accomplishes a magical trick. It combines the euphoric celebration of new technologies, new economy, new lifestyle, new generation of both human and technological gadgets, new wars and new



weapons with complete social rejections of change and transformation. In a totally schizophrenic double pull the consumerist and socially enhanced faith in the new is supposed not only to fit in with but also actively to induce the rejection of in-depth changes. The potentially innovative, deterritorializing impact of new technologies is hampered and turned down by the reassertion of the gravitational pull of old and established values. (2).

In contrast to the unified notion that is upheld by the classical humanist, Braidotti offers a non-unitary notion of subjectivity. In this context, one can also refer to Braidotti's nomadic theory that discusses human subjectivity as a diffractive and distributive phenomenon. In *Nomadic Theory*, Braidotti (2011) argues that the technologically mediated forms of human subjectivity can offer an alternative notion that critiques the liberal humanist notion of human subject that we associate with rationality and consciousness. She states that we need to de-center our normative understanding of agency and autonomy. In an era of biotechnology, Braidotti argues in favor of a "nomadic and post-humanistic vision of the subject" that can offer us an alternative framework for understanding the existential status of the biomedical beings like brain-dead patients (11). She further argues that the notion of self is an "open-ended interrelationship, multi-sexed, and transspecies flow of becoming by interaction with multiple others. A subject thus constituted, explodes the boundaries at the skin level" (221-222).

Plugged into an array of sophisticated machines like X-rays, sonograph, and cardiac monitor, the body of the brain-dead patient emerges as a complex entanglement of biological function and technocratic biomedicine, an entanglement that problematizes the notion of human subjectivity notionally associated with a rational, autonomous human being with a discrete biological embodiment which is considered to be the sole and original ontology of agentic humanness. The brain-dead patients' bodily boundary is reconfigured, extended, and augmented by the machines that convert them into coded devices which can be regulated as well as terminated by flipping off the ventilator to which they are connected. The biological apparatuses connected to the body of the brain-dead patients simulate their bodies' biomechanism thereby turning into a prosthetic extension of their self. The complex manmachine entanglement is represented in Cook's *Coma* thus:

The tube was connected to a large square machine next to the bed that hissed to and fro, breathing for the patient [...] An I.V. line ran into the left arm. An I.V. line ran into the right side of her neck. Heightening the somber effect, a small spotlight directed its concentrated beam down from the ceiling above the patient, splashing over the head and upper body. The rest of the corner was lost in the shadow. There was no motion, no sign of life save for the rhythmical hiss of the breathing machine. A plastic line curled down from under the patient and was connected to a calibrated urine container. (51)

It may be argued that the blurring of the border lines between man and machine as dramatized in Cook's *Coma* triggers the image of a *deterritorialized* and entangled form of subjectivity that is produced through biotechnological intervention. Drawing on N. Katherine Hayles (1999), it may be argued that the patients like Nancy and Elle who are sustained on a ventilator emerges as posthuman subjects who defy the "essential difference or absolute demarcation between bodily existence and computer simulation, cybernetic mechanism and biological organism" (3). Posthuman subjectivity critiques the notion of an independent and autonomous being with clear-cut biological boundaries where the differences between organic and inorganic orders are clearly mapped out. Instead, it defines human as a heterogeneous subject whose definition of selfhood is always in a state of flux. In a posthuman world, human



subjectivity evolves as a result of a complex entanglement, emerging out of asymmetric intersubjective interactions with other organic and inorganic actants with whom we share the biosphere. Ciara Kierans (2010) states that biomedical technologies like "sensory technologies, implantable devices alongside technologically aided ways of seeing, screening, and scanning" have reconfigured human bodily boundaries thereby producing entangled and embodied forms of human subjectivity (31).

Cook's *Coma* offers interesting fictional representations of the technologically mediated forms of communication in the context of patients who are diagnosed as brain dead. The dynamic man-machine relationship as dramatized in the novel problematizes the normative notion of brain-dead patient as an uncommunicative and non-agentic self. The technologically mediated body of the patient Nancy in *Coma* foregrounds how the alliance between man and machine enhances the ability of unconscious patients to communicate about their biological status. In Cook's novel, the first instance of how a patient in a state of unconsciousness communicates through machine is portrayed in the scene where Nancy is anesthetized for surgery. The narrator discusses how the machines become a potent medium for Nancy to communicate about her biological status thereby guiding the doctors to continue her treatment in the state of unconsciousness. During the surgery, Dr. Robert Billing notices changes in the rhythmical beep of the cardiac monitor and immediately instructs the team to stop the surgery. Dr. Billing's puzzled state is articulated thus:

As Dr. Major passed the second curette, Dr. Billing noted a slight change in the rhythm of the cardiac monitor. He watched the electronic blip trace across the oscilloscope screen. The pulse fell to about sixty. Instinctively he inflated the blood pressure cuff and listened intently for the familiar far-away deep sound of the blood surging through the collapsed artery...This was not terribly low but it puzzled his analytical brain. Could Nancy be getting some vagal feedback from her uterus, he wondered? (16)

Dawn Goodwin argues that a patient plugged into an array of machines can offer interesting examples of how a body communicates in a state of unconsciousness and shapes agency without active intentionality, thus problematizing as well as differentiating the ontological locations of those states. Goodwin argues that "the technologically augmented body engenders different forms of expression that in ways compensate for the loss of language" (348). The unconscious body hooked to biotechnological apparatuses develops technologically mediated forms of communication. Goodwin argues that the unconscious patient is not a passive body; rather, the technologically mediated body of the patient contributes in shaping the diagnosis and the administration of medicine by the doctors.

The brain-dead patient Nancy in Cook's *Coma* is not a passive receiver of the medication that is administered in order to sustain her body. Nancy continues to inform the doctors about her body's biomechanism through the biotechnological apparatuses that are connected to her body. In one of the scenes in the novel, when Nancy's body started collapsing because of the depletion of potassium levels, it is immediately decoded and reflected on the screen of the cardiac monitor. The laboratory experts instantly analyze the fibrillated status of Nancy and offer a diagrammatic representation of the electrolyte value to Dr. Bellows. Based on the reports and the mechanical feedback, Dr. Bellows instructs the team of doctors to inject the right amount of potassium to which Nancy responds immediately. The scene throws light on how a dialogic relationship is established between the patient's body and the machines that enhance the unconscious body's ability to convey its needs and to shape the course of the treatment by informing the doctors' interpretation of their physiological



status. More significantly, the scene dramatizes how intersubjectivity and agentic intercorporeality are not necessarily always organic phenomena but can be mediated, co-produced and shared by inorganic actants, thus showcasing the human-machine embodiment as a symbiotic situation.

David Albert Jones (2000) argues that the dominant understanding of personhood in Western biomedicine is influenced by John Locke's notion of a person as a construct of reason and visibly embodied agency, and this Lockean notion of personhood has been epistemically extended in order to shape the shared understanding of the brain-dead phenomenon. Jones critiques the neo-Lockean notion of personhood that does not acknowledge a brain-dead patient as an agentic self. The man-machine entanglement as dramatized in Cook's *Coma* offers us scope to reconsider our shared understanding of agency. The reconfiguration of the bodily boundaries and the redistribution of the physical functions with the machines to which the body is programmed offer the unconscious patient Nancy an alternative route for expression. The monitoring devices that interpret and replicate the biochemical changes of the body in the forms of diagrams, traces, and measurements offer the Nancy a digitalized medium of communication.

The man-machine entanglement as dramatized in Cook's *Coma* throws light on the diffractive notion of agency discussed by Donna Haraway (1992) in her article entitled "The Promise of Monsters." Haraway argues that in the current culture of biotechnology, the reconfiguration of the relationship between man, machine, and animal has offered scope to revise the notion of agency that we normatively associate with conscious humans. Haraway states that agency is not a property possessed only by humans. It indicates the ability to enact emotions and will directed towards change, preservation, or both. In a similar vein, Karen Barad (2012) in her interview talks about the distributive nature of agency argues that agency is associated with the notion of *response-ability* and in the context of brain-dead patients, agency is mutually shared between the patient and the machine though a complex entanglement of crisis and liminality. It is the continuous dialogue between man and machine that sustains the brain-dead patient on a ventilator for an indefinite period through a narrative of responses and representations.

In Cook's *Coma*, the liminal beings like brain-dead patients who continue to execute their agency by their reliance on the machines become a potent medium to revise and redefine the notion of agency that is normatively associated with the conscious mind. Drawing on Dawn Goodwin's study, it may be argued that brain-dead patients like Nancy and Elle are not inert beings, but rather they retain their specificity and individuality in a liminal order of embodiment and agency. Hence, the entangled subjectivity of the brain-dead patients enables us to reconsider the significance of embodiment in the construction of human self and subjectivity. Cook's *Coma* throws light on how the body of the cadaveric organ donor sustained on a ventilator problematizes the notion of human subjectivity that we notionally associate with a unified understanding of biological embodiment. Instead, the man-machine entanglement formulates a hybridized notion of human subjectivity.

Embodied subjectivity

So far, the article has discussed the notion of human subjectivity, consciousness, agency, and embodiment in relation to brain-dead patients who have ceased to be a conscious mind. Interestingly, Alexander Baliaev's (1925) *Professor Dowell's Head* critiques the notion of human consciousness as a disembodied phenomenon by drawing the reader's



attention to the posthumous disembodied conscious existence of the protagonist Professor Dowell. The novel evokes philosophical and ontological questions such as is consciousness a disembodied phenomenon? *Professor Dowell's Head* may be interpreted as a critique of Rene Descartes' philosophical proposition *I think therefore I am.* Descartes (1637) states that mind and body are not merely two different entities but are ontological opposites of each other. The body is conceived as an assemblage of divisible units, whereas the mind is considered to be an indivisible unit that does not alter with the change in the configuration of the human body structure.

In contrast to Descartes, Maurice Merleau-Ponty (1962) emphasizes the subjective experiences and the corporeal dimension of the human self in order to discuss how the body contributes to the construction of human subjectivity. The embodied nature of human self is also discussed by biologists and cognitive theorists, Gerald M. Edelman and Andy Clark. Andy Clark (2008) argues that the human mind evolves as a result of the triadic relationship it establishes with the body and the external world. Clark introduces the concept of "profound embodiment" in order to discuss how the human self evolves as an embodied phenomenon by constantly negotiating with the external world in which it is embedded (42). Gerald Edelman (2006) argues on a similar line in an essay entitled "The Embodiment of Mind." He states that consciousness is the state of the body, a state of the nerves. Mental state cannot be isolated from the body to which it is entwined, and the disembodied conscious state of Professor Dowell and the *lived bodily*¹² experiences of the organ recipient Brigitte enable readers to reflect on the notion of human self as an embodied phenomenon.

The novel primarily revolves around the posthumous disembodied existence of Professor Dowell who is on the verge of a breakthrough in human organ transplantation but dies leaving his research incomplete. Professor Dowell's research assistant Dr. Kern is able to resuscitate the head of the professor by connecting it to biotechnological apparatuses that enable the supply of oxygen and artificial nutrition that are required for the brain to survive. Throughout his life, the professor believed that he is a thinking mind and never paid attention to the body that enables him to interact with the world, but his posthumous existence sensitizes him to the fact that it is the interface between the mind, body, and the world that makes a being fully human. In one of the scenes in the novel, when Professor Dowell requested the research assistant Marie Laurent to release him of his chimera-like existence by switching off the machines plugged into his head, Laurent states that it is a punishable offence to end a person's life who is conscious. The professor enquires bitterly, "Am I still a person?" and in the same tone says, "stripped of physical and moral strength. After all, I'm deprived of everything living people can have. Only the capacity of thinking is left to me. 'I think, therefore I am'" (12). The professor explains to Laurent how his disembodied existence has deprived him of the multitude of embodied sensations that are enjoyed by normal humans and makes a being fully human. Professor Dowell narrates the anxiety of his disembodied existence thus:

Yes, it is horrible. Strange, when I was alive I was sure that I lived a life of thought. I really didn't notice my body much, I was engrossed in scientific work. And only now, having lost my body, I sense what I have lost...I haven't lost my sense of smell and sight, and so on, but I am cut off from the multiplicity of the world of sensation. The smell of hay is good in a field, when it's connected to a thousand other sensations... Losing my body, I've lost the world—the infinite, marvelous world of things that I had never noticed, things that can be handled and touched—and at the same time the sense of my body, myself. (13)



The disembodied conscious existence of Professor Dowell problematizes our shared notion of personhood that we associate with a conscious mind. The notion of consciousness as a disembodied phenomenon is further problematized in the context of the recipient Brigitte whose autobiographical self is profoundly affected by the residual presence of the donor's subjectivity post-transplantation surgery. As a medical practitioner trained in biomedicine, Dr. Kern subscribes to the Cartesian notion of consciousness as a disembodied phenomenon and starts an experiment of reviving a dead café singer, Brigitte, who was shot dead with a bullet piercing her heart. Dr. Kern strongly believes that a change in the biological configuration of the human body does not affect the subjectivity of a person. After the successful completion of the transplantation surgery, the research assistant Marie Laurent observes subtle changes in the voice and gestures of Brigitte. Laurent realizes that, post-transplant surgery, the recipient's subjectivity is gradually morphing with the subjectivity of the donor whose body Brigitte has received. Laurent started enquiries about the anonymous donor and from a news report she comes to know that the body belongs to the famous Italian singer, Angelica Gai. The information about the donor's identity confuses Laurent. The residual presence of the donor's subjectivity that has profoundly affected the subjectivity of Brigitte problematizes Laurent's notion of the body as a spare part or therapeutic tool. The narrator describes Laurent's perplexity thus:

Brigitte sat down and made a casual, graceful gesture with her right hand. Laurent had noticed that gesture many times and wondered whose it really was—Angelica Gai's or Brigitte's? Could the body of Angelica Gai have retained automatic movement, somehow fixed in the motor nerves? (67)

The problematization of the life narrative of the recipient Brigitte by the residual presence of the donor's subjectivity corroborates with the notion of human subjectivity as an embodied phenomenon as explained by Clark and Edelman. In this context, one may refer to Shaun Gallagher's (2005) book, How the Body Shapes the Mind, where he argues that a study of both the scientific and phenomenological details of embodiment enable us to explain the intricate relationship between consciousness, embodiment, and the self. Gallagher's study of the human embodiment throws light on the fact that, "the human body and the way it structures human experience also shapes the human experience of self and perhaps the very possibility of developing a sense of self. If the self is anything more than this, it is nonetheless and first of all an embodied self" thus underlining the embodied nature of cognition and its extension onto the organic ontology of the fully feeling self (3). The fictional representations of the posthumous disembodied existence of Professor Dowell and the post-transplantation experientiality of Brigitte enable the readers to reflect on the notion of human subjectivity with renewed attention on the notion of consciousness as an embodied phenomenon. The experientialities of the characters offer us scope to reflect on the distributive notion of subjectivity that is configured and reconfigured by the embodied experience and state of changes.

Endnotes

² In Ishiguro's (2005) *Never Let Me Go*, the word *complete* is metaphorically used to denote the death of the clones. See Wasson's (2015) article entitled "Scalpel and Metaphor: The Ceremony of Organ Harvest in Gothic Science Fiction," that discusses how the narratives of organ transplantation is metaphorically structured in order to make the process of organ harvesting socio-culturally acceptable.



¹ See the article entitled "A Definition of Irreversible Coma: Report of the Ad Hoc Committee of the Harvard Medical School to Examine the Definition of Brain Death," *JAMA* 205.6 (1968): 337-340, accessed on October 27, 2017. https://hods.org/English/h-issues/documents/ADefinitionofIrreversibleComa-JAMA1968.pdf.

- ³ Lock (2002) in *Twice Dead* defines brain-dead patient as a living cadaver who has suffered fatal brain injuries and is in a state of irreversible coma. The brain-dead patient is sustained on artificial respiratory system that enables the normative functioning of the vital organs of patient's body. It should be noted that there is a conceptual difference between brain death and permanent vegetative state (PVS). The lower brain stem functions normatively in the context of patients who are diagnosed to be in a state of PVS and hence unlike the brain-dead patients, the patients in the state of PVS are able to breathe on their own.
- ⁴ Evans (2000) argues that human consciousness is still an enigma and biomedically it cannot be ascertained that a person diagnosed to be in a state of irreversible coma will not resuscitate to consciousness. Development in biomedical technologies have facilitated mapping of some functions of the brain but there are neurobiologocal factors that are yet to be examined in order to offer a more comprehensive understanding of human consciousness. Evans states that "there are, as yet, no commonly available clinical investigative technique which can diagnose with certaininty total irreversible loss of all brain functions with a few hours of the onset of coma and while the circulation persists" (141).
- ⁵ Braidotti (2011) in *Nomadic Theory* draws on Deleuze and Guattari's concept of *schizophrenic deterritorialization* for the purpose of developing an alternative notion of human subjectivity that is constructed through a complex entanglement between man, machine, and other animate and inanimate entities. Braidotti offers a hybridized, fragmented, and non-unitary notion of human subjectivity that serves as a critique of the liberal humanist subject as an organic whole.
- ⁶ Gaylin in "Harvesting the Dead" metaphorically uses the term *bioemporium* in order to throw light on the working mechanism of the hospitals or the wards where the living cadavers are kept on ventilators. See Gaylin's article for a better explanation of the concept of *bioemporium*. Roger Luckhurst in "Biomedical Horror" states that Cook's *Coma* corroborates with Gaylin's vision of a dystopian society where living cadavers are anticipated to be exploited for organ harvestation.
- ⁷ See also Kant's (1929) *Critique of Pure Reason* where he defines person as a being who possesses psychological attributes like memory, self-consciousness, intelligence, and rationality and has the self-legislative capacity for moral action.
- ⁸ Tom L. Beauchamp (1999), "The Failure of Theories of Personhood," *Kennedy Institute of Ethics Journal* 9.4, https://muse.jhu.edu/article/18629.
- ⁹ See also Leder's (1992) *The Body in Biomedicine: Thought and Practices*. In his book, Leder urges to drawn on twentieth century philosophical traditions like phenomenology, feminism, and post-structuralism in order to examine, critique, and restructure the metaphysical underpinnings of modern biomedicine that conceives body as an inanimate matter. Leder further argues that emphasis should be laid on the embodied, existential, and emotional self of the individuals for the purpose of developing an alternative philosophical framework that will enable us to challenge the Cartesian model of human body which is embedded with Eurocentric phallogocentricism.
- ¹⁰ An analogy may be made between the posthumous disembodied existence of Professor Dowell in Baliaev's novel and the thought experiment known as brain in a vat discussed by philosophers like Shaun Gallagher and Dan Zahavi (2008) in their book *The Phenomenological Mind: An Introduction to Philosophy of Mind and Cognitive Science*. The brain in a vat experiment outlines the scenario in which a brain is kept floating in a vat of chemical and is kept alive by artificial nourishment that is transmitted through an array of machines that are hooked to the brain. The sensory input from the external world is transmitted to the brain via electrodes. The thought experiment triggers questions such as: Do we really need our body to engage in cognitive activities? The thought experiment is considered to be the modern version of Rene Descartes' philosophical proposition *I think therefore I am* but Gallagher and Zahavi have drawn on the thought experiment in order to discuss human consciousness as an embodied and extended phenomenon.
- ¹¹ Cogito ergo sum is a Latin proposition that is translated in English as *I think therefore I am*. Rene Descartes argues that the very act of doubting one's existence serves as an indication of the presence of the mind whereas the body is merely conceived as an appendage to the thinking mind. See part four of *Discourse of Method and Meditations on First Philosophy* for a better explanation of the proposition. In contrast to Descartes's argument, Baruch Spinoza offers a monistic explanation of the human subjectivity. Spinoza's monism is revisited and corroborated by the neuroscientist Antonio R. Damasio as explained in his books like *Descartes' Error* and *Looking for Spinoza*.
- ¹² Merleau-Ponty (1962) introduces the concept of *lived body* in order to explain consciousness as an embodied phenomenon that evolves as a result of a dialogic relationship between mind, body, and the world. Merleau-Ponty argues that it is through our body that we are aware of our self and hence, the focus should be laid on the living body.



References

The Ad Hoc Committee of the Harvard Medical School. 1968. "A Definition of Irreversible Coma: Report of the Ad Hoc Committee of the Harvard Medical School to Examine the Definition of Brain Death." JAMA 205 (6): 337-340.

Aries, Philippe. 1981. The Hour of Death. Translated by Helen Weaver. New York: Vintage.

Braidotti, Rosi. 2006. Transposition: On Nomadic Ethics. United Kingdom: Polity Press.

——. 2011. Nomadic Theory: The Portable Rosi Braidotti. New York: Columbia University Press.

Barad, Karen. 2012. "Matter Feels, Converses, Suffers, Desires, Yearns and Remembers: Interview with Karen Barad." In New Materialism: Interviews and Cartographies, edited by Rick Dolphijn and Iris Van der Tuin, 19-37. Open Humanities Press. http://openhumanitiespress.org/books/download/Dolphijn-van-der-Tuin 2013 New-Materialism.pdf.

Beliaev, Alexander. 1925. Professor Dowell's Head. Translated by Antonina W. Bouis. London: Collier Macmillan Publishers.

Beauchamp, Tom L. 1999. "The Failure of Theories of Personhood," Kennedy Institute of Ethics Journal 9 (4). https://muse.jhu.edu/article/18629.

Bryne, Paul A., Sean O' Reilly, Paul M. Quay, and Peter W. Salsich. 2000. "The Patient, the Physician and the Society." In *Beyond Brain Death: The Case Against Brain Based Criteria for Human Death*, edited by Michael Potts, Paul A. Byrne, and Richard G. Nilges, 91-116. New York & London: Kluwer Academic Publisher

Clark, Andy. 2008. Supersizing the Mind: Embodiment, Action, and Cognitive Extension. Oxford: OUP.

Cook, Robin. 1977. Coma. London: Macmillan.

Damasio, Antonio R. 1994. *Descartes' Error: Emotion, Reason, and the Human Brain*. New York: Avon Books. ———. 1999. "How the Brain Creates the Mind." *Scientific American* 281 (6): 112-17.

— . 2003. Looking for Spinoza: Joy, Sorrow and the Feeling Brain. Orlando, New York and London: Harcourt.

Dennett, Daniel. 1976. "Conditions of Personhood." In *The Identities of Person*, edited by Amelie Oskenberg Rorty, 175-196. Berkeley and London: University of California Press.

Descartes, Rene. 1637. *Discourse on Method and Meditation on First Philosophy*. Translated by Donald A. Cress. Indianapolis & Cambridge: Hackett Publishing Company.

Edelman, Gerald M. 2006. "The Embodiment of Mind." Daedalus 135 (3): 23-32.

Engelhardth, Tristram H. 1989. "Brain Life, Brain Death, Fetal Parts." *The Journal of Medicine and Philosophy* 14: 1-3.

Evans, David W. 2000. "The Demise of Brain Death." In *Beyond Brain Death: The Case against Brain Based Criteria for Human Death*, edited by Michael Potts, Paul A. Byrne, and Richard G. Nilges, 139-153. New York & London: Kluwer Academic Publisher.

Gallagher, Shaun. 2005. How the Body Shapes the Mind. Oxford: Clarendon Press.

Gallagher, Shaun and Dan Zahavi. 2008. The Phenomenological Mind: An Introduction to Philosophy of Mind and Cognitive Science. London & New York: Routledge.

Gaylin, Willard. 1974. "Harvesting the Dead: The Potential Recycling Human Bodies." Harper's Magazine 249 (1492): 23-30.

Goodwin, Dawn. 2008. "Refashioning Bodies, Reshaping Agency." Science, Technology, and Human Values 33 (2): 345-363.

Hayles, Katherine N. 1999. How We Became Posthuman: Virtual Bodies in Cybernetics, Literature and Informatics. Chicago and London: The University of Chicago Press.

Haraway, Donna J. 1992. "The Promise of Monsters: A Regenerative Politics for Inappropriate/d." In *Cultural Studies*, edited by Lawrence Grossberg, Cary Nelson, and Paula A. Treichler, 295-337. New York: Routledge.

Ishiguro, Kazuo. 2005. Never Let Me Go. London: Faber and Faber.

Jones, Albert David. 2000. "Metaphysical Misgiving about Human Brain." In Beyond Brain Death: The Case Against Brain Based Criteria for Human Death, edited by Michael Potts, Paul A. Byrne, and Richard G. Nilges, 91-116. New York & London: Kluwer Academic Publisher.

Kant, Immanuel and Norman K. Smith. 1929. Immanuel Kant's Critique of Pure Reason. Boston: Bedford.

Kennedy, Greg. 2007. An Ontology of Trash: The Disposable and its Problematic Nature. New York: State University of New York.

Kierans, Ciara. 2010. "Transplantation, Organ Donation, and (In) Human Experiences: Rewriting Boundaries through Embodied Perspective on Kidney Failure." In *Culture, Bodies, and Sociology of Health*, edited by Elizabeth Ettore, 21-43. New York and London: Routledge.

Leder Drew. 1992. The Body in Biomedical Thought and Practices. Dordrecht: Springer, Science+Business.



- Lock Margaret. 2002. Twice Dead: Organ Transplantation and Re-invention of Death. Barkeley, Los Angeles and London: University of California Press.
- Locke, John. 1690. An Essay Concerning Human Understanding. New York: New American Library.
- Luckhurst, Roger. 2015. "Biomedical Horror: The New Death and the Undead." In *Technologies of Gothic in Literature and Culture*, edited by Justin D. Edward, 84-98. New York: Routledge.
- Merleau-Ponty, Maurice. 1962. *Phenomenology of Perception*. Translated by Collin Smith. London: Routledge. Nair-Collins Michael and Franklin G. Miller. 2017. "Do the 'Brain Dead' Merely Appear to be Alive?" *J. Med Ethics* 43 (11): 747-753. doi: https://doi.org/10.1136/medethics-2016-103867.
- Potts, Michael, Paul A. Byrne, and Richard G. Nilges, eds. 2000. Beyond Brain Death: The Case Against Brain Based Criteria for Human Death, New York.
- Rassin, Michael, Miri Lowenthal, and Dina Silner. 2005. "Fear, Ambivalence, Liminality: Key Concepts in Refusal to Donate an Organ after Brain Death". Healthcare, Law, Ethics, and Regulation 17 (2): 84-85.
- Sharp, Lesley A. 2006. Strange Harvest: Organ Transplantation, Denatured Body and the Transformed Self. Barkeley: University of California Press.
- 2007. Bodies, Commodities and Biotechnologies: Death, Mourning, and Scientific Desires in the Realm of Human Organ Transplantation. New York: Columbia University Press.
- Shildrick, Margrit. 2008. "The Critical Turn in Feminist Bioethics: The Case of Heart Transplantation." International Journal of Feminist Approaches to Bioethics 1 (1): 28-47.
- Sibley, Priscille. 2013. The Promise of Stardust. United States: Harper Collins Publishers.
- Wasson, Sara. 2015. "Scalpel and Metaphor: The Ceremony of Organ Harvest in Gothic Science Fiction." Gothic Studies 17 (1): 104-142.

