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## **The Philosophy of ‘Novum’ and ‘Cognitive Estrangement’ in Two Singularity Science Fiction Novels**

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#### **Abstract**

*In this paper I shall try to show how modern, Singularitarian, hard science fiction novels embody the very essence of the ideals of ‘cognitive estrangement’ and ‘novum’ as propounded by Darko Suvin in his ‘Metamorphoses of Science Fiction’ (1979). The invention and application of technologies like simulation procedures, neural and physiological scanning and virtual reality afterlife serve as powerful tools or ‘novum’ to usher in an era of Posthuman form of life in which life and death; real and the unreal; good and bad and original and the simulation will lose their meanings and assume new dimensions. The two novels which I am going to take up for the purpose of my discussion are Charles Stross’ ‘Singularity Sky’ (2003) and ‘Upload’ (2012) by Mark McClelland. The influence of the novum in fact stems primarily from the ungraspable nature of the technological sublime especially when it has crossed the threshold of Singularity. Then it will be become estranging not intrinsically in its own right but by producing a set of infinitely variegated pattern of various alternative modes of living.*

**Keywords:** *Science fiction, Posthumanism, Singularity, Estrangement, Postmodernism, Dystopia.*

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**Introduction:** Science fiction narratives often strike us as being distant, cold and rather detached from our day-to-day plane of perception and we often think about it as impossibly fantastic and highly unreal in which the visions presented will most probably never come to fruition at least within the span of our foreseeable future or lifetime. Still the vision has a peculiar appeal of its own; it possesses the profundity and impact of appeal which is not merely absurdly fantastic and unreal but holds the latent promise of pointing towards a new dimension of reality which is equally strange and mesmerizing and is unique in its ability to sustain and harmoniously interfuse many mutually contradictory sets of values and ideals which propel the narrative forward further into the depths of the unknown with an irresistible momentum. According to Freedman without the cognitive type of estrangement no fruitful fusion between science and fiction is possible as mere flights of fancy will not

inspire us to intellectually apply our imaginative prowess to envisage alternate versions of reality but only persuade us to escape into the idyllic world of endless daydreams. The central idea of this thesis will revolve around Darko Suvin's revolutionary concepts of *novum* and *estrangement* as propounded in his *Metamorphoses of Science Fiction* (1979). I shall be trying to show that this idea of estrangement realized by means of introducing a new fictional *novum* produces an effect which is felt both by the characters within the fiction as well as the readers going through the text. Among various highly fecund and speculative ideas which we come across in different science fiction novels the ideas of uploading of self into a virtual reality environment with the hope of gaining the paradisiacal bliss in an eternal afterlife and creating simulation of one's actual mental and physiological states are possibly the most important ones which successfully capture the essential crux of Suvin's groundbreaking ideas of estrangement via cognitive capability and introduction of a *novum*. The ideas of transforming the baseline form of humans into something highly augmented and cybernetically enhanced can also be included under the scope of discussion as this idea too reflects the essence of Suvin's vision of estrangement in which alternate forms of realities or modes of life can emerge to contradict, challenge, distort and even subvert the status quo. The modern hard science fiction novels take these ideas to their very extreme and widen the horizon of our imagination spanning several light-years across and beyond.

**Essential Ideas behind the Theoretical Framework:** It is an undeniable fact that the objectivity of science and subjectivity of fiction are two highly contradictory ideas which cannot be easily fused together, but science fiction narratives seem to work just perfectly by molding and modifying the basic tenets of both of these disciplines so that the essential ideas from both of these disciplines can be easily borrowed and applied in the science fiction narrative to produce the much-described result of establishment of a harmonious equilibrium. Perry Nodelman in his 'The Cognitive Estrangement of Darko Suvin' sums up the essential contradictory relationship between science and fiction in the following words very adroitly: "Science is a way of thinking about reality that takes its objectivity for granted. Fiction is a way of describing reality that assumes the subjectivity of experience—for every fiction, a different way of seeing things, a different reality. The two words together contradict each other. A thing cannot be both "science" and "fiction" at the same time, any more than it can be both "reality" and "fiction." So this is the first of many other contradictory ideas which the fictional *novum* against which the science fictional narrative is set and whose influence bleeds into the verse of science fiction, sustains all throughout the work.

The concept of cognitive estrangement is derived by Suvin from the idea of *ostranenie* as found in the movement of Russian Formalism and Bertolt Brecht's idea of the estrangement-effect named *verfremdungseffekt*. Dr. Andrew Frost says in his paper titled 'Science Fictional Aesthetics: The *Novum* & Cognitive Estrangement in Contemporary Art' that "Suvin's theory of cognition suggests, "the seeking of rational understanding" while estrangement is something that is "...akin to Bertolt Brecht's

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*verfremdungseffekt*”, that is, a representation that “...allows us to recognise [the] subject but at the same time make it unfamiliar.” Suvin’s ‘Metamorphoses of Science Fiction’ (1979) from a structuralist point-of-view attempts to distinguish the genre of science fiction from other branches of fictional narratives. Fredric Jameson in his ‘Archaeologies of the Future: The Desire Called Utopia and Other Science Fictions’ (2005) opines that Suvin, through his definition of cognitive estrangement successfully emphasizes upon the rational and objective dimension of science fiction narratives which many other forms of fiction are clearly lacking in and as such this is a rather exclusive definition. Suvin believes that the path to cognitive estrangement lies in the introduction and application of a ‘novum’ in the story which is totally new and whose presence influences the linear movement of both the narrative as well as our mode of perception of reality in a most revolutionary manner. In a story which features the adventures and exploits of a protagonist who wants to change the course of his life and also the whole world around him the application of technologies like mind and consciousness uploading and modification of one’s body through high-level nanotechnological transplants can serve as novum or wholly new type of devices which can usher in an era of unprecedented change. The reader along with the protagonists are equally caught in the vortex of change and are propelled forward in time to the world of the narrative thanks to the power of the novum thus achieving a truly lasting estrangement effect. Many of these fictions might appear to be simply irrational and even fantastic based on the comparison of present day innovations in the fields of science to those portrayed in the story but science fiction is again different from a scientific research paper in that the former never deals with actual day-to-day realities in an objective, factual and purely empirical manner; rather it is essentially a vision, a projection of the future, an attempt to envisage a particularly promising type of reality among several alternate forms of realities and it functions almost like a novum which makes our mind ready to accept this as one of the most possible courses of evolution. According to Suvin, “Science fiction is a literary genre whose necessary and sufficient conditions are the presence and interaction of estrangement and cognition, and whose main formal device is an imaginative framework, alternative to the author’s environment” (Metamorphoses of Science Fiction, 7-8). SF theorist Carl Freedman in his ‘Critical Theory and Science Fiction’ states that the idea of cognitive estrangement actually refers “to the creation of an alternative fictional world that, by refusing to take our mundane environment for granted, implicitly performs an estranging critical interrogation of the latter. But the critical character of the interrogation is guaranteed by the operation of cognition, which enables the science fictional text to account rationally for its imagined world and for the connections as well as the disconnections of the latter to our own empirical world”. Again as is particularly prominent in various modern hard science fiction novels many highly futuristic and far-fetched ideas are applied in the story to produce the effect of estrangement upon the readers which might appear one to detach rather than involve them in the flow of the narrative as most of these devices or technologies appear to be utterly impossible and ridiculously improbable when compared to the present day standards of scientific prowess of the reader’s own time. Here Freedman very aptly remarks that we should not compare and contrast the technologies featured in the

narrative to those of our own time; rather we should analyze the effects and influences of such innovations as portrayed in the text against the timeline of the story itself and then analyze how far such innovations function to define the central paradigm of life in a dystopian or utopian world. Perry Nodelman's insightful remark about Suvin's application of 'estrangement effects' clearly brings out the essence of Suvin's complex idea: "[Darko] Suvin's "Cognitive estrangement" is the "factual reporting of fictions." For Suvin, this has the significant effect of separating or "estranging" us from our usual assumptions about reality." For Suvin science fiction narratives prompt the readers to estrange themselves from their immediate mundane surroundings and question the very authenticity of various constructs based on which the hierarchical division of their material world is erected. Science fiction provides the readers with an additional space from where they can criticize and question the validity of the supposed truthfulness and substantiveness of their infallible logic of epistemic system.

**Discussion:** Among the two novels which I am going to discuss in the paper Charles Stross' 'Singularity Sky' is the first, another being Mark McClelland's 'Upload', though the latter will be discussed thoroughly in more details. In Stross' 'Singularity Sky' the spacefaring upload civilization named Festival and the Cornucopia machines serve as novum upon their arrival in Rochard's World. The contact with Rochard's World is full of profound and far-reaching consequences and both Festival civilization and Cornucopia machines serve to question, criticize and challenged the status quo in Rochard's World. Upon its arrival at Rochard's World, an outlying colony of the New Republic the Festival begins disassembling objects in the system to make technology for its stay. Then it begins making contact with the inhabitants of the planet by dropping cell phones, forbidden to most citizens of the planet, from low orbit. The band of alien "infovores" known as Festival is basically, a giant space-faring hard-drive with the uploaded consciousnesses of past civilizations that seeks to gather new information. Festival itself was once a real physically existing civilization only to be later transformed into an assemblage of simulacrum of multitudes of consciousness, minds and identities: Once part of a human civilization that had transmigrated into its own computing network, the Festival was a traveling embassy, a nexus for the exchange of cultural information between stars. It was primarily interested in other upload cultures" (Singularity Sky, 8). Unlike a normal upload civilization, the Festival cannot manufacture its own reality with sufficient verisimilitude. So the copies it has been creating is burdened with some constraints like density of information that could be crammed into any given size of their tiny starships but the spaceships of the Festival are powerful in many ways as is evident in its use of powerful upload processors which can make thousands of uploaded minds running faster than real time when there are resources to support them and it is these simulations which they later use to download into new bodies. The world festival has built for itself based on virtual reality is also a hyperreal world in which Festival itself acts like a godlike authority. There is an ubiquitous predominance of simulations overtaking the real as can be seen not only in the actions of Festival Sky itself but also in the functioning of machines like the Cornucopia Machines which are some form of universal molecular assemblers able to recreate objects based on predefined patterns; in the description of the

New Republic's crew whose bodies have been vitrified and minds uploaded into their computational matrices and also in the episodes like when Rubenstein's lieutenant and one of the earliest adopters of transhuman technology offered Comrade Oleg Timoshevsk uses advanced military appliances, accoutrements and uploaded nervous system uplinked to a larger community only to find that in this way maintaining his communication with the real Pre-Singularity world would become extremely difficult. The Festival wants to turn everything it encounters into sets of virtual reality; it favors mechanical reproduction over original creation and prefers replication to original construction. The encounter between The Festival and Rochard's World is fraught with unforeseen consequences as with the help of an artificial technological singularity occurring within the span of a month the rebels threaten to overthrow the totalitarian government but only to end in utter fiasco as a massive portion of the world's population transform itself into bio-technologically augmented humans while other choose to lead lives in virtual states. The nature of the repercussions that the invasion of 'the infovore' Festival civilization engenders upon the smooth fabric of Rochard's World can best be realized in terms of estrangement effects produced by a wholly new agent or 'novum' against a traditional organizational pattern. When the culture of upload technology is introduced it causes the basic hierarchy holding all familiar things together to crumble and collapse – the binary dualities of death and birth; man and the machine; good and bad; strong and weak; existence and non-existence and last but not least real and the hyper-real all seem to be either getting destroyed or transformed into something entirely new. This is the power that a 'novum' exerts over the material world of concrete realities which it can modify, mould, maneuver, make and un-make at its will and any spectacular breakthrough like achieving a Technological Singularity cognitively estranges the new generation of beings from their less advanced and less modified predecessors. Technology thus is depicted as a force which can transcend ordinary beings to the status of omnipotent. The estrangement of the newly born uploaded individuals from the material world of immediately perceptible reality and the problems resulting from their thorough assimilation into the simulated universe of hyper-reality is clearly expressed in the following words: "The first-generation ones, fresh from the meat puppet universe, weren't a problem: it was the kids that got her. Born — if you could call it that — in a virtual environment, they rapidly diverged from any norm of humanity that she could see. More seriously, their grasp of the real world was poor... It wasn't intentional malice; they'd simply matured in an environment where information didn't go away unless someone wanted it to, where death and destruction were reversible, where magic wands worked and hallucinations were dangerous. The real universe played by different rules, rules that their horrified ancestors had fled as soon as the process of migrating minds into distributed computing networks had been developed" (Singularity Sky, 111). The upload culture of the Festival is an all-inclusive one which assimilate, incorporate and improve the lives of all volunteers beyond recognition. It destroys their original personalities but instills them with a spirit and potency which once can never hope to achieve in their ordinary human form. Thus it provides a stepping stone for the ordinary human race to climb up to the status of true Posthuman beings. The human form is just not suitable enough to absorb the density of

extreme information processing and bear the burden of almost infinite intelligence unless it is augmented and transformed into something new: "Ultimately, the very wise lost their humanity altogether and fled their crumbling human husks, migrating into the upload afterlife of the Festival. Intelligence and infinite knowledge were not, it seemed, compatible with stable human existence" (Singularity Sky, 121).

Up until the arrival of the Festival, The Rochard's World has been steeped in the quagmire of rigid, age-old and deeply rooted system of binary oppositions and contradictions as is evident in the absence of any powerful or asserting female authority and character in the novel. In fact Rachel Mansour is the only powerful female protagonist with a voice of her own, others being merely shadowy abstractions. The world of Eschaton is also built upon simulacrum of power and paradoxes unlike Rochard's World. When the singularity occurred on Earth, the almost godlike super-intellect called the Eschaton departed the planet toward the stars and as a result of that nine-tenths of Earth's population vanished overnight. Eschaton could also punish the planets which sought to violate causality by following closed time-like curves to travel into their own past for changing it. Eschaton uses techniques ranging from hurling relativistic impactors into misbehaving planets to detonating artificial supernovae to sterilise an entire civilization. New Republic ship attempts to break this interplanetary law to travel into its own past to arrive at Rochard's World before the festival gets there and puts itself into the danger of being obliterated by Eschaton's wrath for violating causality within Eschaton's historic light cone. Class and gender division are also nonexistent in the Post singularitarian world of the Festival and the Eschaton as the digitally stored consciousness of certain individuals can be downloaded into new bodily existence. The Critics who accompany The Festival and criticize different civilizations to make them aware of their shortcomings have also no gender division and have matriarchal order headed by a queen. In fact in the world of the Critics the gender role has an inverted structure compared to the rigid patriarchal system of the Republic. In the world of the Critics, the females have superior intellectual capability compared to the males and the males are dependent upon the females in many respect. The male members are competent in only warlike activities. Male Critics are in fact discriminated based on their gender and as such are unable to perform contribute to the overall progress of the society. The deliberate discrimination against male members of the Critic and female members of Rochardian Empire bear a close resemblance to each other. When the representations or the simulacrum become dominant the dualistic polarity inherent in such concepts like gender division; division between the good and the bad; division between noble and evil or that between real and the imaginary become obsolete and invalid. This is what happens in 'Singularity Sky'. That is why a clear labeling of Festival is almost impossible as it bears no definite resemblance to any of the positive or negative human emotional traits like benevolence, sympathy, cruelty or jealousy. It is beyond all those emotions. It is a constellation of millions of sentient minds connected to a central network and the minds living there in a virtual reality of their own have no idea about the actual life in real world. The advent of the Singularity destroys the fundamentally

hierarchical pattern of the Western society as the technological ways of achieving salvation based on extropian ideals can follow a countless number of trajectories.

'Upload' (2012) by Mark McClelland is my next novel under discussion and here the effects of a complete uploading of self is portrayed through the description of the adventures of a young man who seeks to escape into the virtual realm of digital wonders by uploading his self into a computer. Thus here we find how by creating a whole new level of reality or 'novum' in the form of a upload medium the characters fuse and assimilate themselves seamlessly after discarding their mundane, material world of concrete realities. So here we see that in creating a deep-level form of simulated reality indistinguishable from the actual world the readers along with the characters themselves estrange themselves from the real and submerge into the alternative world of limitless wish-fulfillment. So reading these novels is more like uploading our own self into a virtual world of futuristic 'novum' where we have to place ourselves in a temporary state of hibernation to fully appreciate the beauty of the strange but visionary science fictional real of strange aesthetics and this inevitably involves the conscious or unconscious process of estranging our mundane self from its immediately perceived-to-be-true roots of worldly realities and then plugging it into a meticulously constructed matrix of Posthuman aura. In McClelland's 'Upload' we find programmers and computer engineers are able to mimic the actual and maneuver various strands of Nanotronics to construct a highly accurate and immersive virtual world occupied by digitally created people, animals and objects. Raymond, the hero in the novel wants to go beyond the superficial voyeuristic thrill of engaging in trifling interactions with the virtual avatars; he rather wants to create an even deeper level of simulacrum –“one so realistic that nobody would be able to tell it apart from an actual person...He had quickly discovered that the easiest way to do this was to record a real person and use sophisticated pattern recognition and replication software to "learn" the person's personality” (Upload, Locations 224-225). The ethical dilemmas involved in the process of simulating mind-states of scanned individuals also start assuming alarming proportions as the novel progresses and any act involving a destructive scanning of the subject for the purpose of creating his/her simulated self begins to be deemed unethical and inhuman. The uncertainty regarding handling the subtle and intricate interrelation between scanned mind and simulated body proves to be an insurmountable obstacle in some cases. Various aspects involving this carefully chalked out plan of devising a life-like simulation for an animal have been vividly described in the novel from which it becomes crystal clear that the construction of a most perfect form of simulacra demands addition of several layers of simulation in a systematic manner while gradually degrading with each added level of modification all previously existing states of physical realities thus keeping the mind-state of the yet unaugmented consciousness of the test subject hooked to a virtual plane of alternate lifestyle from which at a later period its fully capable and augmented version would emerge and assimilate itself into the matrix of simulation: “The approach to scanning they had taken thus far was first to monitor all major systems in the live source animal, then destructively scan the entire body cell by cell, with nanobots. Every cell in the nervous system was mapped into a highly specialized computer wherein the self-configuring hardware mimicked the behavior of the

brain and all nervous pathways into and out of it. This computer then interfaced with a simulation running on another computer, a simulation of every other system of the body—muscular, skeletal, digestive, etc. This "body" simulation also provided the sensations of the virtual world in which the uploaded animal perceived itself as existing. All of the scientists on the team were pretty confident in the accuracy of the nervous system scan, but many unknown complexities lay in the neurohormonal effects of the body on the mind and vice versa” (Upload, Locations 743-744). The sensations derived from interacting with and immersing oneself in the immersive world of virtual reality might not at first seem to easily reproduce all the subtle nuances which normally shape the rich and variegated embroidery of our mental experiences and make each such experience unique by filling it with an added touch of grace and blissfulness. Again, experience gained in the virtual world would not only be devoid of many of the original blissfulness of its real-world counterpart but would also be free of various downsides which invariably accompany each such real world experience. For example, drinking excessive alcohol can damage brain cells and liver in human being in real world but in virtual world no such effects of drinking would exist; only the feeling of inebriety and intoxication will be emulated in the virtual subjects. Thus we see how the novum of upload technology simultaneously holds two strands of mutually contradictory forms of possibilities. Characters like Anya maintains that essential mental experiences would nevertheless be same irrespective of where it is felt – whether in the real or the virtual. She wholeheartedly believes in the benefits of such a life-changing experience like uploading one’s self to virtual reality which can enable one to exist in higher dimensional planes of existence. Raymond here decides to experiment with assimilating his own self into the virtual plane of existence. Raymond knows that Anya is genetically modified individual who is essentially a pinnacle of perfection both in beauty and intellect but cannot help but wonder why such a beautiful creature like Anya would be interested in a naturally anti-social guy like Raymond himself. Raymond’s mind wanders off to speculate on various aspects of mind-machine synthesis and repercussions that uploading of one’s self to a virtual reality environment can have. “He wondered whether an uploaded mind would experience that same pleasure, and it occurred to him to start his own journal of sensations, that he might test their presence if he succeeded in uploading himself. He immediately thought of the confusion of lust, tenderness, defensiveness, compassion, and joy he felt when he and Anya had kissed, not two weeks before, and wondered whether an uploaded mind could know such confused exhilaration” (Upload (Kindle Locations 803-806). Despite having numerous drawbacks and uncertainties merger of man and machine via uploading of one’s mind into virtual environment is still believed to be one of the best ways to ensure a blissful and more complete mode of living. One such proponent of man-machine synthesis via virtual reality technologies is Bob who believes that the time has finally come for the humans themselves to enter into the era of complete obliteration of self and assimilation into the matrix of simulation. Bob says, “Life is all about the power of order... The power to survive in the face of entropy. Evolution is the anti-entropy, and digital life is the next step. We don't want to give that next step away, to life-forms we merely created. We want it for ourselves, and a merger is the natural solution. There are



plenty of people happy to hand the reins over to computers and live like pampered pets, but not me. We've built the vehicle that can take us to the next step, and it's just a matter of time before we get in and fire it up” (Upload, Locations 854-856). Virtual reality possesses various gaps, fissures and inconsistencies with respect to the natural world and characters who embrace this form of reality often wonder about the differences which still exist between virtual and real. Raymond even after deciding to adopt a virtual form of life pines for indulging in the bliss of organically derived series of experiences just before his embracing of the digital mode: “Again he was filled with the desire to savor the pleasures available to him as an organic life-form. Time with Anya made him aware of his deprived sensual experience, made him want to enjoy the details of the natural world for fear that they would not be the same in simulated form. Anya was the key to a worldview Raymond had never really imagined. He found that the idea of eating roasted meat conjured a very basic sense of success within him. A very masculine notion of success. And it wasn't just the food, he realized. It was the thought of being served animal flesh prepared by a woman. A gene-job, sure, but a beautiful woman very much of this world. A real woman, with a heart that pumped blood through her body, a creature subject to the natural laws of the universe— with gravity to contend with, cells to nourish, and the chaotic damages of time to face” (Upload, Locations 951-955). Thus we see how natural inclinations, impulses and instinctive drives are interpreted as naturally encoded laws inhibiting the mind to assimilate itself wholly in the immersive world of virtual reality built upon various layers of simulacra. However, the estrangement effects produced by the novum of upload technologies and scanning processes continue to seduce Raymond to put on the new form of life in the digital hyperspace. Just before embarking on a voyage to enter the world of virtual pleasures Raymond's mind starts getting filled with various thoughts, hopes and premonitions regarding the mysterious nature of his next life. He like Bob believed that this virtual form of life is the most effective way to deal with the inexorable law of increasing entropy in the natural world by creating a brief, isolated pocket of extropian existence which relies on increasing order and harmony for its smooth functioning: “He believed as Bob did that organic life was merely a vehicle of complexity, and digital life was the next step in the evolution of that complexity. And he was on the cutting edge, entering into a world that he believed was already populated by intelligent life— artificial life, complex automata, and the handful of animals that they had uploaded in the lab” (Upload, Locations 962-965). Every step of such an arduous and ambitious project as mind uploading is fraught with numerous complexities and unforeseeable dangers but that is hardly what dissuades the embracer of these technologies. The beacon of an everlasting afterlife, the allure of a life full of most exotic experiences free of various predicaments and shortcomings which beset its earthly counterpart and the hope to live out one's dreams as fully as possible are what inspires men to plunge into the depths of this dangerous experiment. The appeal of cognitive estrangement again simply proves to be too irresistible for the man to ignore as it opens before him a whole new portal of hitherto undiscovered garden of wonders. Besides various unpredictable obstacles and perils there are those which are obviously present from the very beginning and could happen more frequently once researchers attempt to simulate

more complex brains of the primates: “Unexpected patterns in his nervous system that cause the nanoscanners to halt or collide. The scan could miss some portion of the brain without our realizing it. Segments of memory could be lost, some percentage of the corpus callosum could be bypassed— millions of things could go wrong” (Upload, Locations 1112-1114). Raymond ponders on various ways to avert the dangers inherent in a destructive scanning of personality in which all remnants of the original object or individual is irretrievably lost forever and speculates on the possibility of a “backup of the neural architecture at the time of the scan and revert to that neural backup once the physiological simulation has been ironed out” (Upload, Locations 1124-1125). Another project which goes hand-in-hand with the upload one is sustenance project; it is seen as complimentary to the upload project in which through a series of computer-controlled steps the human brain is preserved, protected, nourished and sustained very carefully. Here too there are various uncertainties as the uploaded brain is so far removed from the original one in more than one aspect that controlling all the aspects of its dynamic nature is really difficult: “the difference in granularity between a sustained body and the simulated physiology necessary for an uploaded brain is hard to guess at...we could be overlooking some essential mental component, or we could have a simulated body that would leave an uploaded brain gasping for oxygen, bleating for proteins” (Upload, Location 1204). Raymond thinks on different aspects and possible consequences of volunteering his body for Bob Well’s upload project – he is more than just enthusiastic about embracing the fruits of living a full life in virtual reality environment but ominous thoughts of his never being able to revert back to his unaugmented but organic self seems disastrous for him. He does not know what to do but the lures of uploading his body and mind and living his life as a simulacrum seems irresistibly beautiful to him: “His body could be scanned at a pretty high resolution without any harm. His physiology could be monitored and replicated in simulation, such that he might gain some useful details on the nature of his hormonal existence. The scan would even include most or all of his neurotransmitters, if he understood it correctly. The model provided would be of limited history and not of perfect resolution, but it might be of some use if he did manage to upload himself” (Upload, Locations 1340-1343). The novel very artistically and vividly describes the source and spring of Raymond’s desire to enter the world of simulated life with almost a poetic touch and it will be clear once we go through the following passage that describes Raymond’s actual motivation behind volunteering his body and soul for such a dangerous project, that the idea of sacrificing his original, organic self for adoption of the simulated one is not just an idle dream of an escapist but it goes beyond any such dream as he looks upon it as a perfect opportunity for himself and for the rest of the mankind to ascend and move one step closer to the status of true Posthuman. Thus it is the idea of transcending his original, baseline form to a Posthuman one which actually drives him to undertake such a daring task: “Uploading was more than a dream for him now. It was his escape plan...Intellectually, he saw uploading as a chance for the sick to escape their failing bodies, a chance for scientists to gain a deeper understanding of the mysteries of the human mind, a chance for humans to reduce their impact on the environment. It would facilitate space travel, allowing humans to beam their minds across

the solar system in digital form. On a more personal level, it represented a means of entering a world wherein his imagination could define every aspect of his own reality. It would give him the opportunity to escape society, or create his own if he wanted one” (Upload, Location 727). These lines can be said to constitute the essential manifesto for the proponents of Transhumanist ideal of mind-machine merger and this is the core idea which drives the dream of every upload technology both in science fiction narratives as well as in real world experiments which seek to improve and augment the basic human conditions beyond man’s wildest stretch of imagination. Bob, a hardliner of adopting any or all available upload technology without discrimination even defends the potentially unethical and inhuman destructive uploading by avidly advocating for unquestionable embracing of simulation and upload technology and so he wonders that why should anyone care to return to his mortal self once he is provided with the golden opportunity to live forever in the virtual afterlife of infinite possibilities: “There are just too many people who don't want to die. Uploading offers longer life, and a richer, cleaner existence. And, ultimately, there's no getting around it— the powerful people of this world can't bear the thought of giving up all the heroism of a new era to computers. Artificial life is already racing ahead” (Upload, Locations 858-861). Raymond had always fancied about living his life fully in Nurania without any restraint or moral obligation to anything he might commit. He now believes that the upload procedure has presented him with this golden opportunity. Raymond’s creation Nurania in the virtual afterlife is what that can be termed as a ‘novum’ or new place which exists outside the scope of a common, day-to-day cycle of monotonous and mortal reality; but it is only after uploading himself into that novum that he begins to question about the possibility of ever being able to realize that dream: “Nurania as one of creating and enjoying his own personal paradise...Nurania, world of his own creation, felt strange and threatening, as if it had taken on a life of its own and turned on him.” (Upload, Locations 3416-3417). He suddenly feels himself to be utterly powerless and devoid of all control over his situation. He questions about the nature of this new life or the afterlife and feels skeptical about calling it an afterlife for this in fact was supposed to be a smooth continuation of his earthly existence and not a termination of his past self as he sought to remove only the barriers before him in his original life so that he might live it here fully in a most harmonious and fruitful manner leaving none of his dreams unrealized; instead here in the new version of his life he feels like a powerless, impotent shadow of a man who is neither totally dead nor fully alive. Raymond wonders about the catastrophic possibility of accidentally dying even in the virtual afterlife. This is the danger the ominous seed of which every upload technology bears within it: “It was entirely possible, he suddenly realized, that he had in fact died when the nanobots destructively scanned his body, and this was his afterlife. The perfect hell. A ghost, powerless in a world of my own creation. But that didn't feel right. This was such a plausible continuation of his life, how could it be the afterlife? Something must have gone wrong with his upload— this was the simplest explanation. He wondered whether he could die in this world” (Upload, Locations 3419-3423). In one of the experiments on a character named Molly Raymond witnesses in firsthand step by step ascendance towards the plane of virtual mode of existence – which is more like some kind

of awakening to a new state of being. The Posthuman state of existence again is said to be incomplete without man's ability to switch to and from his mortal, mundane existence and entering into one's virtual avatar. Various technical issues like handling of consciousness during the entire procedure and making true replicas of the subject's mind-states have been described with a detailed but aesthetically suave and appealing manner. The gradual establishment of a neural link or a fusion between mind and machine is as abstract a thing to be described in vivid details as anything can be: "Molly's mental data, so carefully recorded and mapped during the scan, was moved into position in its new brain. Patterns of light spread quickly up through the primitive core of the brain, then through both hemispheres of the display. One lobe after another came to life, activity spreading outward from center. Finally, the cerebral cortices lit up, indicating that Molly might be gaining consciousness...The physiology simulation came out of its ready state—the connection between mind and physiology had been opened. The brain started to receive sensory signals and send directives to the body" (Upload, Locations 2665-2666). Thus we can see how this novel successfully captures both the raw details and projects its vision of future evolution of mankind without ever becoming imaginatively stale and repetitive. The entire atmosphere impresses upon the readers like a living, breathing, sentient organism which is gradually trying to assimilate the mental, neural and even physiological components of its readers with a swift but imperceptible touch. Simulation again is seen like a heavenly doorway to a newer, fuller and more enriched form of life.

**Conclusion:** Through this discussion I have attempted to show how a major portion of the action in modern science fiction novels derives its impulse from Darko Suvin's groundbreaking ideas of novum and cognitive estrangement. I have taken up two contemporary hard science fiction novels namely Charles Stross' 'Singularity Sky' (2003) and Mark McClelland's 'Upload' (2012) to establish my viewpoint. I have tried to show how it is not only the characters who undergo 'cognitive estrangement' as a result of the impact of a 'novum' or a wholly new kind of powerful device but the readers also feel the effect of it and science fiction novels often serve like 'novum' to them. The readers might feel goaded to question and contradict various long-cherished and securely established sets of values which are so prevalent in their day-to-day world of material reality and thus become aware to the possibility of arrival of a new or alternative plane of existence. Singularitarian science fiction novels like McClelland's 'Upload' or Stross' 'Singularity Sky' serve as powerful and highly potent forms of 'novum' which serve their purpose of cognitively estranging the protagonists in the story as well as the readers most brilliantly and they do this by employing ideas and concepts like upload technologies, hyper-immersive virtual reality environments and simulation procedures. With the impact from these technologies the traditional epistemic system based on various binaries of dualistic opposition will gradually give way to a more dynamic, complex, self-interacting and self-sustaining mode of knowledge in which real will be indistinguishable from the unreal; life and death will lose their usual significance and the original will be indivisibly bound with its simulated counterpart.

**References:**

1. Stross, Charles. (2003). *Singularity Sky*. 2003. New York: Ace-Penguin.
2. MacClelland, Mark. (2012-09-18). Upload, 2012. Kindle Edition.
3. Suvin, D. (1979). *Metamorphoses of Science Fiction: On the Poetics and History of a Literary Genre*. Yale University Press, 1979.
4. Jameson, Frederick. (1991). *Postmodernism or, The Cultural Logic of Late Capitalism*. London, Verso. 1991.
5. Freedman, Carl. (2000). *Critical Theory and Science Fiction*. London: Wesleyan University Press, 2000.
6. Dr. Frost, Andrew. (2013). *Science Fictional Aesthetics: The Novum & Cognitive Estrangement in Contemporary Art*. in Cleland, K., Fisher, L. & Harley, R. (Eds.) *Proceedings of the 19th International Symposium of Electronic Art, ISEA2013, Sydney*. <http://ses.library.usyd.edu.au/handle/2123/9475>.
7. Nodelman, Perry. (1981). *The Cognitive Estrangement of Darko Suvin*. *Literature Association Quarterly* 5.4 (1981).
8. Jameson, Frederick. (2005). *Archaeologies of the Future: The Desire Called Utopia and Other Science Fictions*. London, Verso. 2005.
9. Milner, Andrew. (2009) *Archaeologies Of The Future: Jameson's Utopia Or Orwell's Dystopia?*. *Historical Materialism* 17.4 (2009).