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Humans and Robots in Satyajit Ray's "Professor Shonku and Robu": Communication and Confrontation

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Abstract: Humans display psychological turmoil in maintaining their individualities while simultaneously molding their preferred/patronized individuals. This "successor"/"inheritor"-image is a potential element in the field of "Artificial Intelligence" in which the skillfully designed fleshy exterior of a robot or a constructed form of "Artificial Intelligence" disrupts the boundaries between the robot, the humanoid, and the human. Satyajit Ray takes up this theme in his Bengali short story "Professor Shonku and Robu" (translated in English by Gopa Majumdar) which explores the father-son/creator-created rivalry in which the *perfect* robotic son attempts to replace the *imperfect* aging human father (both look exactly identical exteriorly). Mechanical perfection turns out to be a failure and initiates psychological conflict. The paper addresses this tension and explores the apprehensions experienced by the creators regarding their creations, with highlighting the textual details in Ray's story. The discussion particularly looks at the subtleties in communication as well as conflicts between the humans and robots brilliantly envisioned by Ray. The discussion also draws references to the ancient Egyptian concept of "ka" in terms of identities. The paper shall also explore the contradiction within humans trying to deal with the extensions/expansions/duplications of selves and also establishes how Ray has presented a unique psychological study concerning identity and recognition.

Keywords: "Artificial Intelligence," "*Ka*", Creator-created rivalry.

The binaries of the flesh and the machine, and the organic and the artificial, complicated by identical appearance/surface in cases of the human and the robot, constitute the plot of Satyajit Ray's Bengali short story "Professor Shonku and Robu," translated in English by Gopa Majumdar (Ray 134–156). In Ray's short story, working with a tight budget, Trilokeshwar Shonku constructs a mechanical "assistant" for handling



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mathematical equations, and affectionately names it/him "Robu" (Ray 135–136). Responding to the invitation from the German scientist Rudolph Paumer, Shonku carries Robu for the European scientists to appreciate and interact with his "assistant" (Ray 134–142). Robu however fails to respond to Professor Gottfried Borgelt (actually Borgelt's robot) when the latter asks Robu to identify it/him by uttering its/his name (Ray 146). Concerned and fearing a possible mechanical defect, Shonku brings Robu to Borgelt's residence at Borgelt's behest for investigation (Ray 146–150). Shonku is subjected to a difficult persuasion by the robot-Borgelt to trade Shonku's Robu with it/him, and upon denial, Shonku faces attempted murder by the robot-Borgelt by electrocution (Ray 150–154). Robu arrives to save Shonku; initiating a tight embrace, Robu separates the robot-Borgelt's head from its/his body exposing the hitherto, apparently human Borgelt to be a highly efficient Robot (Ray 154–156). It is revealed that the robot-Borgelt, made in the likeness of its/his creator, Dr. Borgelt, masqueraded as Dr. Borgelt himself, and Robu is able to "feel" Shonku's imminent danger thanks to the device implemented within it/him by Paumer, which grants it/him the faculty of psychic connection with Shonku (Ray 143–144, 147, 155–156). Paumer's magnanimity in this regard is indeed beyond any monetary value or technological recognition, since he does not keep the device for himself, but gives it away to Shonku's Robu (Ray 141–156).

In terms of functionality, Robu can be perceived as an example of the ancient Egyptian "shabti," as perceived from Lisa Nocks's accounts (4–5). The ancient Egyptians of the New Kingdom perceived the "shabti" as an attendant commissioned by/for the dead person in the realm beyond the mortal world (Nocks 5). From Nocks's discussion it can be inferred that the "shabtis" were quite analogous to robots, created for providing labor, the word "*ushebti*" (meaning "answerer" [qtd. in Nocks 5] in ancient Egyptian) standing for someone who responds in compliance, fulfilling an instruction given by the human master (Nocks 4–5). In that sense Robu is an interesting specimen of a "shabti": it/he is designed to give correct answers to Shonku's questions (Ray 140, 145–146).

As envisioned in Ray's story, a machine is able to categorize the working mechanism of other machines. Even when Shonku commits an error in distinguishing between the human and the robot, the human-related information-packed Robu correctly identifies the robot-Borgelt as non-human, and also expresses irritation like a human at the latter's attitude (Ray 144–146, 155–156). The deformed Robu, though unaesthetic and facially not symmetrical, is bestowed with the gift of correct calculation (Ray 139–146). The



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perfectly built (apparently/exteriorly) robot-Borgelt is incapable of mathematical precision; this shortcoming might be the source of Robu's irritation (Ray 139–146). Since Robu is an enhanced calculator, the robot-Borgelt taunts Shonku that Robu might have an estimation of the voltage needed to electrocute a human (Ray 153). This seems to be a crude ridicule of Shonku's diligent numerical record of the finance needed regarding the manufacture of Robu, hinting at Shonku's satisfaction of having Robu as a device (Ray 135–136). Robu likewise, is not at all concerned (and depressed) about its/his looks, but it/he understands responsibility (Ray 135, 154–156).

Borgelt's robot has been successful in imitating personalities as well as intelligence of people. It/he is able to judge the opponent and take necessary steps in bringing the opponent under control. In Shonku's case Borgelt's robot does so through imitation of the human nature of bribing (Ray 150–154). Interestingly, bribing can be construed as one of the "performances" through which a machine can become human, though not humane. A bribe is a numerical over-equation, for an extra profit, while mathematics aim for balance, with a resolved result. Shonku's efficient Robu stands for that sense of balance and composure; Borgelt's suave robot conflates quality with quantity. Borgelt's robot tries to bribe Shonku with golden (but obsolete) coins which do not have immediate transactional worth but do have antiquarian value (Ray 151–152). In contrast, Robu's "production cost" is meagre (Ray 135–136) but it/he is an asset as its/his computational faculty is worthy (Ray 136–137, 138–141).

The robot-Borgelt represents the utmost energies and efforts of Dr. Borgelt; it/he even resembles the human Borgelt in build and conducts activities in his place, including communication with other scientists, for its/his ulterior motives. This results in the rift between it/him and its/his human creator; the rift involves a tension as well as an attraction between it/him and its/his human father-figure, Dr. Borgelt. This tense interaction can be discussed in terms of the ancient Egyptian concept of the "ka." Martin Pehal and Markéta Preininger Svobodová note that the "ka" is transmitted through father-son embrace ("ka"-symbol being represented with "two outstretched arms" in hieroglyphs) (126). The embrace involves union, assimilation but also absorption (Pehal and Preininger Svobodová 126). In Ray's story it initiates revelation and cessation of a false identity. The robot-Borgelt detains its/his own creator who intended it/him to be a son-figure (Ray 155–156). It/he tries to seek independence both from the affectionate hold of its/his human creator and from its/his machine-self by going around like a human, and another machine's embrace (Robu's) exposes its/his



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machine-self. This constitutes an irony since humans embrace humans expressing affection - an essential human quality. In this context it may be observed that the hands are important agents of conflict in terms of the interaction between the "Artificial Intelligence" and the human. Robu overpowers the robot-Borgelt by its/his embrace (Ray 154), while the robot-Borgelt threatens Shonku with electric volt from its/his finger (Ray 153–154).

In Ray's story, Shonku's Robu embraces Borgelt's robot in its/his attempt to destroy the human Borgelt's mechanical extension, the psychopathic robot-Borgelt (Ray 154). In the context of Robu's overpowering of Borgelt's robot, an interesting connection between the head and the heart may be cited with reference to the ancient Egyptian *Book of the Dead*. Jeremy Naydler notes that in ancient Egyptian perspective, the "vital energy" is stored in the heart connected with the "ka" (Naydler 186–187; also see Geraldine Pinch 68, 165). Robu gains a *heart*-like agency in its/his "head" (Ray 155) but Borgelt's robot does not, though its/his *brain* acquires cunningness and deceit (Ray 144–156). In the mechanical agency of "artificial intelligence," the "skull" becomes the seat of intelligence and empathy hence the removal of the head/skull (in this case, of the robot-Borgelt) reveals one's mechanical identity (Ray 154–156).

The robot-Borgelt being the exact copy of its/his creator in appearance can be perceived in terms of the exteriorly existing "ka" equivalent to the "second person" (qtd. in Naydler 196) to the primary subject's physical form (Naydler 196). The robot-Borgelt is not just aware that it/he is a robot; it/he is also conscious of the changing temperaments of the human guests supposed to be received by its/his human creator, Dr. Borgelt (Ray 145–146, 148–156). In other words, the robot-Borgelt must utilize its/his source-original's (Dr. Borgelt's) social memories of other humans, and (to some extent) communicate those contexts of socializing, even if the motives are fake. It is intriguing to note that even though Robu gains cerebral and emotional capacity for feeling for its/his human creator Shonku (Ray 153–156), the lack of humanness in terms of its/his appearance somehow reduces any possible rivalry between the creator Shonku and the created Robu. Robu is considered a skilled "assistant," a dutiful follower, it/he might have had realized its/his creator's genius; but it/he does not pose the threat of trespassing and/or trying to be an impostor, since humans have the tendency to attribute credibility regarding actions to appearances and physical presences (Ray 134–156).

Robu is proved sentient because saving Shonku from the robot-Borgelt (Ray 151–155) is not a mathematical equation or a manual assistance for which it/he is primarily built. Robu is also able to respond



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to sonic data/questions posed to it/him through sounds/utterances, and identifies the mechanical identity of the speaker (the robot-Borgelt) that makes Robu remain non-responsive (Ray 141, 145–147, 154–156). The human and the machine realms are thus distinguished in this sonic register, because the text does not sufficiently provide details for the readers to assess the capacity of Robu's eyesight. However, it is implied that Robu could definitely distinguish between objects and humans, and has a clear sense of direction required for locating and reaching both the human and the robotic subjects/identities; it/he is thus able to reach the particular room in which Shonku is held captive by the robot-Borgelt (Ray 149–155).

It may be observed that Paumer attributes a part of his own psyche, through his invented "gadgets" to Robu, which makes us wonder if the newly acquired skill provides Robu with a limited extension of Paumer which could be built upon further by Shonku's future inputs of data (Ray 141, 143–144, 155). However the unquestioned ownership over Robu is stressed by Shonku's insistence on identifying and rather demarcating Robu as the aid-giver (Ray 135–138, 140). In this context, Borgelt's aim is different from Shonku's: Borgelt wishes his robot to evolve into a surrogate mechanical son (Ray 155–156).

The instruments inserted in Robu's head add the capacity for independent emotions to the existing mathematical intelligence (Ray 143–144, 147–156). As Naydler notes, in ancient Egyptian anatomical perception, the heart is valued as purer, influenced by the observation of the positioning of the heart in the upper torso (Naydler 185). The heart is represented in the *Papyrus of Ani* with a hieroglyph representing "a vase" that symbolically constitutes and perceives the heart as a container (Naydler 186–187; *Ani Adores His Heart*). It seems, as apparent from the ancient Egyptian iconography and hieroglyphic representation of the heart, the organ is perceived as organic and having a material capacity. Paumer's device inserted in Robu works like a psychic backbone, similar to the connection between the cranial and the central nervous systems in living entities; for Robu it functions both as the head and the figurative heart (Ray 143–156). Since the "gadgets" are secured by Paumer within Robu's cranium, a functional unity between the head and the heart (the archetypal sites of reason and emotion respectively) can be said to be initiated within Robu, reflected in its/his independent decisions (Ray 143–156). Robu's instinctive concern for Shonku is also purely functional, since apparently the distorted "smile" attributed to the "squint" eyes *provided* by Shonku on its/his face (Ray 136, 142, 154) still emits a degree of trustworthiness since humans can feign happiness. Robu displays a "smile" but cannot feign the intensity or the intentionality behind the action of a smile (Ray 136, 142, 154).



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Thus looks are incomprehensive; the reasoning faculty and harmony between body parts and organs matter in constituting a sound sentient individual.

The flawlessness in function does not always depend upon human status. Robu's mathematical skill is rather antithetical to its/his considerably disproportionate metallic face as seen externally. Its/his squint eyes strike a discord with the other characters in Ray's story. Robu's constant "smile" even at its/his violent engagement with the robot-Borgelt to save Shonku (Ray 154) comprises a grotesque humor. It/he is intelligent in "intension" but still non-human in appearance. This projects a very crucial strand: the intensity of our feelings for someone influences our (favorable) judgment of him/her and the conceived images/notions about him/her. Robu is Shonku's extended ego; Robu's ability to identify people it/he meets is built upon Shonku's own memory-index (provided to Robu through information) and the relationshipgraph with those people. Like neutral numerical figures, Robu is taught to recognize organic beings. It/he evolves to identify robots, thanks to Paumer's "gadgets" - a feat perhaps not intended even by Shonku himself (Ray 133-156). So when Robu remains "silent" before the robot-Borgelt, Shonku gets concerned regarding Robu's silence viewing it as a possible mechanical fault (Ray 142–156). Shonku's ego is actually pricked at the seeming "error" of Robu in not complying with the robot-Borgelt whom Shonku unknowingly mistakes for the human Borgelt (Ray 142–156). Ironically it is the robot-servant Robu's "error," construed by the human scientist Paumer, that makes the creator Shonku feel uneasy, because Shonku is unaware of Robu's alteration following Paumer's incorporation (Ray 142–156).

Thus the *humanness* of the *master* can be reconstituted by his robot-*servant*. The "calculating success" of/for the human is judged in terms of augmentation of machine-activity. Shonku feels uneasy because the robot-project requires sheer physical toil which Paumer no longer possesses (Ray 142–143). Here an analogy could be drawn between (i) seminal fertility and virile strength required for producing an heir and (ii) building a mechanical "assistant" with cerebral and physical capacities (Ray 142–143). Both project manifestations of ownership and if we think neutrally, parenthood involves degrees of custodianship. Shonku specifically notices that answering to his bidding appeals more to Robu than the "natural" sights of Germany (Ray 143). It implies that the appreciation of scenic beauty is an indicator of independent "Aesthetic Intelligence" possessed by humans (for discussion on "Aesthetic Intelligence" see Albert <u>Piaget</u>'s *Aesthetic Intelligence: A Complete Guide to Help Business Leaders Build Their Business in Their Own*



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Authentic and Distinctive Way) and it goes beyond quantification. Had Robu been able to do so, it/he would have gained qualitative sentience and freedom to assess beauty. The robot-Borgelt, though displaying physical promptness, does show aging hair, suppressing any immediate scrutiny/detection (Ray 144) which cunningly hides its/his robot-self and makes its/his humanness more credible.

In Ray's story, however, the quality involving efficiency and the beauty of replication are questioned. Borgelt's robot can be passed off as an art, but without consumerist value, since he is an expert in "Artificial Intelligence" (for conception and discussion, see Ela Kumar's *Artificial Intelligence*) and not an art-patron. Shonku's Robu is a mathematician (yet a servant) and is meant to remain so, hence its/his worth as an "Artificially Intelligent" calculating device is not judged in terms of looks. Even if Robu developed empathy, it/he can neither substitute Shonku, nor induce identity-crisis in Shonku because Robu resembles something equivalent to an "installation," a machine crudely bearing the looks of a humanoid structure, but not of a human. To be *human* it also means to be selective and to be manipulative when required. In human preference the perceptions of organic beauty create divisions amidst the entities because beauty creates and maintains the hierarchies of selection and preference for the privileged. Robu with its/his facial distortion is free from any comparison in terms of beauty because even with emotional empathy its/his appearance remains unaltered. Thus in Ray's story, the robotic identity's nature of perfection is kept quite detached from intimacy and is pivoted upon its ability to work with numbers. Ultimately a healthy balance is sought between the role of an assistant and the role of an empath; both attributes are gained by Robu.

Robu displays a learned response to Borgelt's straightforward mathematics problem (which is a cunning test actually) while robot Borgelt displays bodily "perspiration" while witnessing Robu as a rival (Ray 145–146) (which represents a real visceral response). In these instances they both seem to be have equally imbibed human traits, since learning, imitation and anxiety seem to be more conscious performance than enacting out sadness and happiness in which one might lose self-control (Ray 146–147). Robu "knew" that the questioner is not human hence it/he does not respond while asked by robot-Borgelt to identify it/him (Ray 146). But the robot-Borgelt, though near-human in appearance and narcissistic (a trait which might have been learned and internalized by it/him owing to its/his creator's ambition), considers Robu's silence as a concerning error, forgetting that its/his own equation-solving faculty is lower than that of Robu's (Ray 145–146, 150–156). Shonku is perturbed fearing his efficiency as a creator might experience a tumbling at



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Robu's inability to identify Borgelt (Ray 146–147). The robot-Borgelt however displays superb reading of Shonku's apprehensions. It/he confidently plays with Shonku's fear in a conversation on the phone, assuring that the other human fellow scientists would not be invited during the investigation of Robu, thereby preserving Shonku's honor and apprehension regarding Robu's supposed fault (Ray 146–147).

Shonku's interaction with Robu thus highlights the insecurities of the human creators regarding the loss of authorities over machines, and Ray uplifts Shonku by letting him accept Robu's upgradation by Paumer. Shonku also evolves from a detached *master* to a concerned *guardian* and Robu upgrades from a complying *machine* to an empathic "companion" (Ray 133–156). The mathematical discipline has been aptly chosen by Ray for its purity in scope and functioning with numbers, since other disciplines like philosophy, literature, and aesthetics tend to function on approximation and relativity. Working with numbers enables Robu to bear an impersonal identity; the incorporation of emotional capacity bestows it/him with conscience and obligation. Borgelt's robot tries to be precise and perfect, but these qualities often involve selection and elimination which might sometimes bear ulterior interests. Ray thus depicts a healthy and constructive relation between human and machine while simultaneously showing the imbalance between ambition and technological enterprise. Ray's "Professor Shonku and Robu" is thus an important text exploring the power relations between human creators and robots with an earnest yet rational observation. The references to the ancient Egyptian concept of "ka" also establish the semiotic bonding between beings; thus it can be concluded that certain intrinsic connections exist even while transiting from beliefs to technology.

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Note:

For further discussion of "ka" I request the readers to look at my previous publications listed below:

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Please note that in the parenthetical citations given in the article, "Ray" refers to Satyajit Ray.

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