

Human-Robot Relations and Robotic Attachment in Kazuo Ishiguro's *Klara and the Sun*

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Abstract

Kazuo Ishiguro, the Nobel-winning writer, explores human-robot relations in his 2021 science fiction novel, *Klara and the Sun*. This story is narrated from the perspective of Klara, an anthropomorphic social robot with humanlike characteristics such as observing, learning, empathising, and interacting. She changes her identity from an attractive object to a reliable attachment figure, forming close bonds with, and even becoming an extended self of, her owner. Thus, this story challenges the traditional human-robot relations away from the master-slave model and develops into an intimate and beneficial connection. Drawing on John Bowlby's concepts of "safe haven" and "secure base" and David Levy's new interpretations of attachment theory, this research explores why human characters seek robotic attachment instead of human companions and how the close attachment is revealed in human-robot relations. The findings of this study make more contributions to the human-robot relations in literature in a positive perspective.

Keywords

Robotic attachment, human-robot relations, master-slave relations, safe haven, secure base

Introduction

In conventional science fiction (SF), robots are usually depicted as workers, servants, or slaves with some typical representations. For instance, in his story "The Bicentennial Man" (1976), Russian-American science fiction writer Isaac Asimov tells the story of a robot named Andrew who faces human biases, anti-robot sentiments, and complex questions about his legal, civic, and social rights. Through prolonged legal battles, Andrew gradually wins the right to earn his own

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income, to wear clothes, to enjoy personal freedom, and to make autonomous decisions. It takes Andrew two hundred years to be recognised as human. Similarly, *Rossum's Universal Robots* (1921) by Karel Capek also depicts some robots created for performing laborious and dangerous tasks to serve humans. These robot-as-slave stories explore their otherness and inhumanness, which connects SF narratives with historical legacies of slavery and past cultural memory. Therefore, according to Kakoudaki, "robots have the potential to materialize what Toni Morrison has called an 'Africanist' presence, a figuration of otherness that captures complex feelings about mastery and enslavement, sovereignty and its vulnerabilities" (117). A similar position showcases the association between robotics and slavery, which imagines a new form of slavery and neo-slaves in the current world. Therefore, the view robots are slaves has become common knowledge for most people, as Bryson states that "robots should be built, marketed and considered legally as slaves, not companion peers" (1).

However, due to rapid advancements in artificial intelligence and robotics, robots are now designed to be more anthropomorphic and are upgraded with skills that match or even surpass human abilities such as observing, thinking, talking, and showing empathy. This greatly enhances their interactions with humans and transcends their roles beyond doing drudgery-related tasks to handling more cognitively and emotionally demanding jobs. Increasing reports have shown robots have become a famous domestic tool as carer robots, psychological therapy robots, or sex robots, and so on. In some countries, especially Japan, robots as caregivers have been hugely used in caring for the elders. We also see news about robots applied in psychological treatment to cope with emotional problems. David Levy even predicts that "by around 2050, robots will be hugely attractive to humans as companions because of their many talents, senses, and capabilities" (22). Robots have become "social robots," interacting more with humans in everyday domestic environments and eliciting emotional bonds with humans, which makes humans more dependent and attached. As Sherry Turkle states, "Technology proposes itself as the architect of our intimacies. These days, it suggests substitutions that put the real on the run" (1). In another aspect, currently there is widespread solitude among people, but they are still afraid of intimacy. They constantly prefer to deliver messages than talking privately because we dread excessive intimacies that generate individual vulnerabilities. In this case, technologies serve as an approach, which can offer a view of companionship but without the demands of excessive intimacies.

Emotional reliance on robots has been described in some SF novels, particularly in such works as *Do Androids Dream of Electric Sheep* (1968) by Philip

K. Dick, *Machines Like Me* (2019) by Ian McEwan, and *The Stone Gods* (2007) by Jeanette Winterson. In these fictions, human-robot relations are mutually attached and reliant, not totally opposite. As Dautenhahn suggests, “Robots in this paradigm are not considered slaves or servants; rather, they function as considerate and reliable companions in typical everyday environments” (2007). Expressions like “artificial companions,” “robotic companions,” and “artificial friends or partners” have emerged in literature to refer to human-robot personal interactions.

Contextualising the novel

This article explores questions relating to human-robot relations based on Kazuo Ishiguro’s *Klara and the Sun* (2021), which revolves around the relations between Josie, a 14-year-old girl suffering from a mysterious and fatal illness owing to genetic enhancement, and Klara, an artificial friend, who has been sold as a companion and robotic caregiver. In this novel, Ishiguro portrays a huge sense of solitude around Josie who has little connection and complex relations with her mother. It is undeniable that Josie’s mother has a deep love for her and thus chooses gene editing. However, regardless of Josie’s decisions, this kind of love seems quite authoritarian and paternalistic, causing physical and mental suffering for Josie. In the meantime, her mother becomes quite remorseful facing the anxiety of the possibility of death. Therefore, the relationship of the mother to the child in *Klara and the Sun* has been so intense that makes room for an alternative robotic attachment. Some critics have noticed that there is emotive potential between humans and robots. Anfeng Sheng and Fei Wang (2022) discuss the emotional communications in recent SF novels and movies. They argue that humans and robots can have emotional connection but this kind of relationship is not equal. Therefore, robots cannot replace humans in intimate relationship. Lanlan Du (2022) considers that “Ishiguro speculates a world in which our relationship to technology is not one of enmity and antagonism, but that of aspiration and hope” (555). She thinks that Klara in *Klara and the Sun* can function effectively as a companion and intimate friend which is no longer exclusive to humans.

Additionally, A. K. Ajeesh and S. Rukmini (2022) hold that the recent studies of transhumanism and posthumanism produce a lot of SF novels altering an antagonistic attitude towards AI. These novels usher in a new notion of AI: “A perception that challenges the conventional notions of AI as a machine devoid of emotions” (1). They argue that Ishiguro has entitled AI with capabilities of showing human qualities, which helps to achieve the conclusion that AI can be a good companion and can embody empathy, hope, and love.

The current study further supports the attitude towards AI and human-robot relationship, but investigates this issue from the perspective of attachment theory. It explores human-robot relationship in the framework of John Bowlby's attachment theory and David Levy's extension of this theory. Ishiguro presents a world in the near future where artificial intelligence has been widely used at home as the AI friend. Narrated from a robot's perspective, Ishiguro showcases the loneliness of humans, the unknown fear and unquestioning belief in robots, and the awakening consciousness and emotions of robots. When robots can consciously understand human emotions, show empathy, and imitate human behavior, they can be good companions. Based on this, I argue that this story shows a positive entanglement between humans and robots and that robots can be the attachment figures.

Attachment theory and robotic attachment

“Attachment” means a strong bond someone has with another figure who can provide inner security and safety and the absence of whom will bring psychological distress. Academically, attachment theory initially applies to the attachment between infants and their caregivers, pioneered by John Bowlby, who proposes three crucial factors of attachment relations: safe haven, secure base, and proximity maintenance. Safe haven means a turn to the attachment figure who can provide physical, emotional, or intellectual help when one needs care, comfort, and support. Particularly when people are ill, they extremely desire for an attachment figure. The primary function of safe haven is to palliate physical pain and emotional distress. Secure base signifies using attachment relationship as a base to engage in nonattachment behaviours, such as exploration. It provides a “sense of safety from the attachment figure which incurs exploration, risk-taking, and self-development” (Sigal, 350). People who can provide secure base have wisdom and intellectual power to help others. Therefore, a safe haven is more related to healing, comforting, and soothing while a secure base is more concerned with removing vulnerabilities.

Bowlby's attachment theory originates from the mother-baby relationship. A young baby always seeks for the attachment to their mother. Besides the close attachment to the mother, this theory suggests that babies develop attachment to a few other caregivers such as the father and even specific objects following a period of maternal attachment, demonstrating their emotional investment. However, the mother continues to play a significant part because she always provides the baby with safety. Soon after a baby can crawl, they begin to explore other objects and people, however, they return back to make sure that the mother is still there. The mother is like a “haven of safety” and provides a

“secure base” and then the baby feels confident to explore. Research also shows attachment behaviour is elicited when the child or adult is sick or in trouble, and when they are frightened or cannot find the attachment figure. Meanwhile, when the attachment is unnoticedly missing, it leads to separation anxiety. And then the child or adult will seek for another trusted person or object to recover from the loss.

During the 1970s and early 1980s, Bowlby’s ideas on attachment were considered by some psychologists who were investigating the adults’ love and loneliness. Furthermore, the phenomenon of “material possession attachment” is studied to research on human-material relations, showing “it might become less and less of a commodity, more and more a part of our life” (Levy, 28). When the role of caregivers is replaced by domestic robots, special commodities, we wonder whether robots also can be the attachment figure. In 2007, David Levy, a technological expert, published his landmark book *Love and Sex with Robots*, which seeks to extend attachment theory to robots-human relations. He holds that “robots have the potential to be even better companions... because robots will be designed and programmed to enjoy their interactions with humans to the fullest and to behave accordingly” (60). He also observes that when it is hard to find intimate figures, people resort to non-human attachment – including places, pets, symbols, deities, or objects – to ensure security. This broadens the conception and application of the attachment process. Levy holds that “attachment to a material possession can develop into a stronger relationship as a result of the possession’s repeated use and the owner’s interaction with it” (28). The commodity has become part of our lives and has special meaning for us, which makes us attached to it. Borrowing from Donald Winnicott’s 1951 essay “Transitional Objects and Transitional Phenomenon,” Levy emphasises the significance of transitional objects. He sees a close bond between humans and objects. Based on these, he concludes that attachment relations have four typical characteristics: an attachment figure takes the role of the infants’ mother, providing assistance and emotional comfort all the time; the feeling of “separation distress” occurs when attachment relationship is destroyed; attachment figures functions as “safe haven,” making sure a distressed person can find contact; attachment figures have roles as “secure base” to help explore the world (69).

Besides, Levy also considers the impact of proximity on attachment. Based on a study from the University of Michigan, which finds that roommates are more likely to become friends than students living far from each other. Levy argues that proximity and repeated exposure also lead to attachment because living near and seeing someone frequently creates “a much more fertile

atmosphere for friendship and love” (31). When people live near, they may see each other more, spend more time, and talk more with each other and thus create more interaction with each other. Therefore, he applies this into human-robot relations. Levy says robots nowadays are programmed to finish basic tasks and interact emotionally with humans. Particularly, anthropomorphic robots are endowed with human features who can understand humans’ thoughts and feelings, do something that satisfies humans and create a feeling of attachment. Besides, Levy claims that “reciprocity will likewise be a contributing factor in the growth of affection felt by an owner for a robot, when that robot demonstrates its virtual affection for its owner” (62).

Levy explains this point through an example of raising pets. Both the dog owner and the dog find the presence of each other comforting and encouraging. He contends that “The human propensity for loving our pets thus informs our understanding of the emotional attraction to computers, to robot pets, and to humanoid robots” (63). Loving robots can be supplementary to human affection. As home and sociable robots, they live with humans, which create the chance of proximity. More importantly, they are desirable to communicate, interact, and relate with humans in a personal way. In the digital age, people find a robot friend is more empathetic, loyal, resourceful, and easily approached than human companions who increasingly show indifference, prejudice, and profitability. When robots are sufficiently advanced in emotion, cognition, and personality, they are adequately potential to be the attachment figure to human beings.

Promoting robotic attachment in *Klara and the Sun*

Bowlby states that “attachment behavior... has as its aim or goal proximity to a mother-figure” (106). However, in this novel, it is obvious that the human protagonist, Josie, grows up in a seemingly unhappy family where the human characters, especially the mother, do not give her sufficiently secure attachment. Josie’s mother is a serious, cold, and strict woman with a high-ranked occupation. She consistently engages in her work, sharing moments exclusively with Josie during brief coffee interludes. In doing so, she thinks she can manage her life as she says to Josie’s father, “but I keep hanging on, as you put it, because on the day I stop, Josie’s world, my world, would collapse” (191). Josie also cherishes these precious limited moments, lest she feel lonely for the entire day. As Bowlby proposes, “presence of mother is associated with comfort while the absence of mother is associated with distress” (144). Even brief companionship imparts a sense of connection, attachment, and intimacy. Additionally, Josie’s mother likes making decisions and planning the future for Josie, including what groups of friends she should connect with and what the future is like for her. She continues

to accept genetic enhancement even though her first daughter Sal has died from it. What she insists on for the benefit of the children elicits unrecoverable trauma in Josie's life. According to Bowlby, children are anxious and insecure who are usually exposed to typical patterns of pathogenic parenting, which include: "one or both parents being persistently unresponsive to the child's care-eliciting behavior and/or actively disparaging and rejecting them... persistent threats by parents not to love a child, used as a means of controlling him" (165). Thus, the relationship between Josie and her mother is quite intricate. According to attachment theory, the mother or other caregivers are the first attachment figure for individuals. Therefore, on the one hand, most of the time, Josie manifests complete agreement with her mother's decisions, aiming to safeguard against the prospect of maternal departure. Whether the interaction meeting her mother arranges for her or even genetic enhancement concerning about her health, she will accept all. As once, Rick, Josie's best friend, conveys Josie's message to her mother,

She says no matter what happens now, never mind how it plays out, she loves you and will always love you. She's very grateful you're her mother and she never even once wished for any other. That's what she said. And there was more. On this question of being lifted. She wants you to know she wouldn't wish it any other way. If she had the power to do it again, and this time it was up to her, she says she'd do exactly what you did and you'll always be the best mother she could have. (Ishiguro 282)

From the perspective of her mother, she is quite contradictory. She deems that genetic enhancement will bring a prospective future for Josie, but feels regretful for the accompanying deadly illness. She has feared Josie has harbored resentment to her. What she seems to have forgotten about the past sadness that is shaded by a cold heart and busy work. However, she tells Klara, "It must be nice sometimes to have no feelings. I envy you" (Ishiguro 97). It indicates the mother always attempts to conceal her sadness and misery. Therefore, such complicated mother-daughter relations cause Klara's feeling of insecurity and unattachment.

Besides, although Ishiguro does not mention much about how unfriendly relations between parents and parental divorce have badly influenced Josie's life and attachment style, there are still some hints about such impacts. Josie's mother has confided to Klara, "He was... substituted... We get along better now. That's the important thing for Josie" (Ishiguro 99). Josie's father is a substituted engineer who has been absorbed in his own world and takes little responsibility for the family. He lives a casual and lazy life, as Josie mentions, "Dad never gets places on time. And after Mom promised to pay for his taxi" (Ishiguro 185). He

can accept the situation such as losing the job or living in a slum. However, Josie's mother does not allow Josie to be a common person, which leads to their continuous quarrel and separation. Josie lives in an unharmonious family atmosphere and always needs to mediate the relations between parents. She cannot build good attachments with parents who frequently shout, yell, and argue with each other. When the father leaves, Josie has lost a sort of attachment to one of the parents. She still craves her father's love and expects he could come back often. According to Bowlby, "this picture of attachment behavior as a normal and healthy component of man's instinctive equipment leads us also to regard separation anxiety as the natural and inevitable response whenever an attachment figure is unaccountably missing" (106-07). Divorce is likely to affect children's attachment security, as Bowlby notes that "some children who have experienced loss of or separation from one parent may fear the loss of or separation from the other" (949).

Upon Josie's father's departure, the dissolution of her secure base ensues, leading to attachment loss anxiety by virtue of unwilling separation. Thus, Josie has a fear of losing her mother on whom she is emotionally dependent. She seeks proximity and repeated exposure with her mother, as Bowlby says, "Whilst attachment behavior is shown especially strong during childhood when it is directed towards parent figures" (106). She caters to her mother's words and behaviors lest her mother will abandon her as in the case in Morgan Fall. So she also asks Klara, "You won't go away, right?" (Ishiguro 13). This feeling of abandonment permeates her personality. However, Josie cannot build good attachment with her mother, as a matter of fact, because they do not have much of the inherent communication, only requirements and subjection.

Moreover, the unique environments, such a lonely and isolated place, will need more attachment forms. Josie's apartment is far from the city and other buildings, where the highway and the hill will be in the view from the bedroom window. She does not go to school because what she joins are online classes. She does not have many friends around, which brings huge loneliness in her life. The motif of human loneliness is haunted and repeatedly mentioned in *Klara and the Sun*. Through the observation of a robot, Ishiguro writes the loneliness of the children and adults. In the window, Klara sees AI friends follow the children who seem still quite sad and lonely without the company of their parents and friends. Klara realises Josie is such a lonely child the first time she meets Josie although Josie has a big laugh at the same time.

In the novel, children's loneliness is partly due to the separation of the higher and lower class, such as the relationship between Josie and Rick who has not gone through the process of genetic life. As Josie's best friend, Rick makes

Josie's life full of hope and expectations, but just as he says, "a lot of things come in the way of friendships"; indescribable obstacles bring about their different life (Ishiguro 61). They are doomed to separate when they grow up because of the cruel class category in society. Rick and Josie have a plan to stay together, which will help to relieve Josie's loneliness. However, this fear of separation badly influences Josie's attachment with Rick. Therefore, this friendship cannot give her a secure base.

Teenagers who have no solid security are rootless, anxious, and lonely. They need more physical and psychological support. Particularly, illness enhances the sense of unattachment. In this novel, Josie is ill, requiring a more reliable attachment figure than ever before, as Bowlby maintains, "Attachment behavior... is elicited whenever a person (child or adult) is sick or in trouble, and is elicited at high intensity when he is frightened or when the attachment figure cannot be found" (106). Illness requires a closer attachment with others to ease emotional fragility or ensure the existence of love. An ill person loses secure base from themselves and hopes to confirm it from those who are attached to them. Hunted by the fear of death, particularly the influence of her sister's death, Josie yearns for close attachment with people around her.

Attachment theory argues that close relations guarantee physical and mental support to defend against illness, unhappy realities, and annoying daily life. However, the breakup or termination of maternal love will elicit the desire to seek other attachment figures, sometimes nonhuman attachment, on which the following discussion touches.

Klara as an attachment figure in *Klara and the Sun*

Klara is originally a commodity on sale in the window of a shop, who is later purchased by Josie to accompany her, help her with chores, and defeat loneliness. Since coming to Josie's apartment, Klara has stayed with Josie every minute, increasing their intimacy and changing into attachment. Studies have shown that "the closer they lived, the more likely they were to become friends," the phenomenon of which is defined by psychologists as "repeated exposure" (Levy 31). Short distances create chances to see each other frequently and more potential to have an affinity. Klara's repeated exposure and interaction with Josie endows her with a special meaning, making Josie invest more "psychic energy" and further stronger attachment to Klara (Levy 29). Klara's uniqueness and individualisation explain as to why Josie treats her so well. Josie always attempts to consider and satisfy Klara, for instance, taking her to Morgan Fall or outside for beautiful views and insisting she come into the kitchen to get more sunshine power at the cost of a query with the mother. When Josie is seriously ill and clear

about the horrible substitution plan, she still comforts Klara, “I’d never let anything bad happen to you.... Nothing’s changing” (Ishiguro 259). The familiarity built through seeing each other often, spending time together, thinking about one another, and anticipating each other's presence has established a close attachment between Josie and Klara.

As an anthropomorphic humanoid, Klara has many humanlike abilities, for instance, doing housework chores. More importantly, as a social robot, she has excellent skills of observing, reasoning, learning, and socialising. Besides, she has been endowed with emotions and empathy. Currently, robots are used in mental disorder therapy because they can make eye contact or act in a human way to drive the relationship with humans. This can explain why many robots are regarded as family members. In this case, Josie’s father responds, “part of the family. Is that what you are saying?” when he is required to say hello to Klara (Ishiguro 190).

David Levy claims relations that are attached have four features: like the infants’ mother, an attachment figure takes the responsibility of “proximity maintenance,” providing help whenever support is needed; when attachment relation is broken, “separation distress” occurs; the role of the attachment figure is as “safe haven,” allowing distressed persons find contact; an attachment figure has the role of “secure base,” giving the confidence and power to explore the unknown world knowing the attachment figure is nearby and accompanying (69). In this part, I will analyze Klara’s roles as a “safe haven” and “secure base.”

As a robot nanny, Klara is responsible for taking care of Josie, including waking her up, accompanying her to tutorial classes, organising her room, ensuring her safety, and, above all, observing her health. She takes the mother’s place and is always “standing just inside the bedroom door in readiness to help” (Ishiguro 114). Through learning and thinking, she can notice Josie’s abnormal circumstances from her posture and breathing, and then she uses the alarm button to report to the mother. Seeing Josie grow too warm due to the giant sunshade, she learns to use the remote to adjust the curtain. As an attachment figure can provide a safe haven to give physical support, Klara focuses all her attention solely on Josie and helps to relieve Josie’s physical difficulties. They share stories and enjoy beautiful landscapes, although sometimes they have disagreements. However, all these make them close friends. In addition, to save Josie’s life, Klara constantly ponders how she can help rescue Josie from her weakness. Thus, she goes to Mr. McBain’s barn regardless of her safety and destroys the Cootings Machine despite impairing her cognitive abilities. All she does is to provide “safe haven” for Josie at the moments of needing care, support, and help. Because of Klara’s companionship, Josie’s condition is getting better

physically and psychologically, as Josie's mother says, "She needs you with her" (Ishiguro 69). "To tell you the truth, I wasn't sure at first what I'd feel. Having you around, moving through the house all day. But Josie's so much more calm, so much more cheerful since you got here" (Ishiguro 89). Knowing Klara is always nearby, Josie is more confident and courageous to socialise with other teenagers, imagine the future with Rick, and visit Mr. Capaldi. Klara confides, "it's never dull to be with Josie.... I have no wish other than to be Josie's AF." This makes Josie feel "no fear behind it" (Ishiguro 136). Similar to the parents' secure base, which "a child or an adolescent can make sorties into the outside world and to which he can return knowing for sure that he will be welcomed when he gets there, nourished physically and emotionally, comforted if distressed, reassured if frightened" (Ishiguro 11). Klara gives hope and contributes to her intellectual power through learning and reflecting. Should there be something unsolved, she positively asks for others' advice or help. With the help of Rick and Josie's father, Klara can pray to the sun and damage the pollutionary machine. For Josie, the more secure the base is, the stronger she will be. David Levy proposes ten factors applied to human-robot relationships, and one of them is reciprocal liking, which is suitable for the Klara-Josie relationship (147). In the shop, Klara is faithful, keeping her promise to Josie, which brings Josie hope and belief. Klara's love is seen and moved by Josie, who reversely treats Klara well, embracing and affirming her role as a friend.

To sum up, short of a close bond in real life, Josie chooses a robot as a friend and forms an attachment with her because of the proximity, safe haven, and secure base Klara can offer. Josie is genetically enhanced, to some extent, and thinks she is very similar to Klara, a technological artifact, and shares some similarities with her. This also contributes to their attachment.

Conclusion

From an artificial robot's perspective, Ishiguro depicts humans' loneliness and anxieties elicited by emotional indifference and societal hierarchical ranks. Due to the lack of close attachment from humans, people turn to seek attachment from social robots who can provide physical and emotional services. They show more empathy and can be a "safe haven" and "secure base" for humans. When the test of human uniqueness shows there are no essential parts that cannot be produced, Ishiguro invites us to think about what it means to be a human and whether robots can entirely replace humans. Therefore, in this novel, Ishiguro describes a harmonious picture of human-robot relations, which applauds robotic development while showing concerns about human relationships and anxieties about robotic replacement.

At the end of this novel, with the support and companionship of the robots, Josie recovers from the serious illness and successfully enrolls in university. She abandons the robot, leaving her live or die on her own. This ending of this story deeply reflects Ishiguro's concern for the fate of robots. When robots sacrifice themselves to help humanity, humans ultimately give up them. In the information age, will robots be reduced to another form of the "Other", much like women or animals? Will humans still regard themselves as the only subject in the world? Ishiguro expresses his anxiety towards the destiny of robots, comparing them with the grandparents who are forgotten when they finish caring for the grandchildren. While robots can serve as the good attachment figures for humans, will humans remain the same all the time? This is a question that requires answers from all of humanity.

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