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Emotional Interdependence Between Lifted Children and Artificial Friends in Ishiguro's *Klara and the Sun*: An Exploration through Attachment Theory

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Abstract

This research explores the emotional bonding that is formed between lifted children and artificial friends in the novel Klara and the Sun. This research uses John Bowlby's Attachment Theory and discusses the emotional bond between the children and artificial companions and how these bonds are formed and affects lives. This research also discusses the effects of emotional bonding on the characters both emotionally and psychologically. The first objective of this thesis is to examine that how novel shows emotional interdependence of the lifted children on their AFs. The second objective discusses about the psychological impact of this emotional bonding. Psychological effects of the emotional bonding are discussed through the characters of Josie, Klara, Chrissie and Rick. While focusing on the Theory's ideas and textual analysis of the novel this research provides insight that how bonding of AI and humans are shaped in the society. The findings of this research show that AI often provides care, emotional comfort, sympathy and loyalty to the Josie a lifted child but in return demands nothing. The study also reveals that emotional attachment that is not received from parents leads toward gaining comfort from other entities. The research discusses the concern about the future of care and emotional attachment where technology is currently growing and becoming common, through this research researchers better understand that how the emotional needs, empathy and bonding are evolving both in fiction and in real life. Thus, the research provides a new framework by combining psychological framework and literature to discuss about technology.

Key Words: Artificial Friends, Attachment Theory Emotional Attachment, Lifted Children, Psychological Effects

1. Introduction**1.1 Background of the Study**

Friendship has been remained very important part of human relationships for centuries. The friendship bond has always been seen as a human relationship that is based on common experiences, biology and also shared emotions of humans. However, the definition of friendship is now changing because of the rapid development

in the area of technology especially in the areas of the robots and artificial intelligence. During the recent years, research into the humans and AI relationships has drawn attention of many. In the past years the definition of friendship has evolved as the technology is improving now the friendship is seen as an emotional tie either with the human or an AI. The friendship of artificial intelligence and the robots are increasing due to the rapid growth of technology. In today's era technology is changing the people's point of view their lives and also their emotions. Many literatures have been written on artificial intelligence and literature is also investigating that how machines are becoming the part of human lives not just only physical but also emotionally. One of the most powerful examples in the literature is Kazuo Ishiguro's novel *Klara and the Sun* (2021). The novel talks about the story of lifted children who are genetically modified to be excellent in academia and also were given artificial friends to provide support. These robots are like human companions and provide emotional support, care and protection. Ishiguro addresses the emotional interdependence between lifted children and artificial friends discussing about the major issues about the nature of love, friendship and humanity (Ishiguro, 2021).

The novel mainly focuses on one AF, Klara and her relation with a lifted child named Josie. With the progress of the story the reader observes that Klara becomes deeply connected with Josie not just as machine but also someone who starts to care in human like ways. Josie also depends on Klara when she is really ill and feeling lonely. The research focuses on the emotional connections between the lifted children and artificial friends and how this emotional interdependence affects their mental well-being. This emotional interdependence between lifted children and artificial friends also affects the characters psychologically and emotionally. In *Klara and the Sun* Ishiguro uses the artificial friend Klara who is programmed in such a way that she helps people who are lonely, to show the emotional attachment behaviors. Klara demonstrate the emotional intelligence and she also forms a very close bonding with her human companion, Josie. Although Klara is a machine, her beliefs, emotions and behavior such as hard respect and belief in the Sun as a source of life and hope shows a complex understanding of sacrifice and love. The boundaries between the human identity and attachment are blurred by this present study and this also puts attention to the nature of emotional bond between humans and robots. The narration of the novel is done by a artificial machine Klara, who is a B2 Android. Klara is very sensitive and observant robot and her observational qualities makes her different among her other fellow robots. She has a very keen sense of the observation and notices minor changes in emotions, behaviors as well as facial expressions of the humans. Klara is very intelligent and quick to highlight loneliness in humans. As her store manager also says about her that: "Klara has so many unique qualities, we could be here all morning. But if I had to emphasize just one, well, it would have to be her appetite for observing and learning. Her ability to observe and blend everything she sees around her is quite amazing. As a result, she now has a more sophisticated understanding of any AF in the store, B3s is not expected." (Ishiguro, 2021 Part 1).

The story of the novel revolves around the experiences of Klara helping a young girl, Josie with genetic modifications. This process of genetic modification is called "lifting". The process of lifting would improve academic performances and overall chances of achievement for these children but it also increases the risk of severe illness. Hence, this process promises already secure academic from performances and outstanding mental abilities but drastically reduces the child's immunity. This research focuses on the emotional connections

between Klara and the Josie. It shows that how lifted children, like Josie become emotionally dependent on artificial friends and how these dependence affect their mental as well as emotional well-being.

For the study of these emotional bonds between machines and humans the research uses John Bowlby's Attachment theory. It is a psychological framework that demonstrates the importance of early emotional bonds and how these bonds impact person's emotional and social development over the course. According to the hypothesis developed by British Psychologist John Bowlby, newborns have a biological predisposition to find out closeness as a strategy of survival when they are under the condition of stress or fear. The child sense of safety and security shows and serves as a corner store for their healthy emotional development. Therefore, it is the attachment link that must be maintained. The "Attachment behavior system" which is the basic concept in the attachment Theory shows that how people follow intimate relationship with their attachment figures. This research explains that children form so strong bonds with their primary caregivers either they are parents, other humans or machines. It will also help to show that how the characters in the novel are shaped by their emotional relations with artificial friends and what it meant to live in a world where technology takes over on the emotional roles that are once filled by the humans. A child built emotionally stable relations when the caretakers are attentive, very responsive and consistent in responding the needs of the child. A child can barely explore their surroundings when there is a safe base knowing that they would always turn to the caretaker and it's provider for support and assurance (Ainsworth et al. 1978). On the contrary, insecure attachment may be the cause of irregular or careless care giving and show up as avoidant. Moreover, the attachment theory is also applicable to adult after childhood. People have different approaches towards friendship and even the parenting styles are affected by the emotional patterns they formed during their early years. Insecure attachments standard result in the problems that are included emotional independence of the partner anxiety or trouble expressing vulnerability.

Attachment Theory discusses that early emotional ties have an influence on person's abilities to build healthy relation and control their emotions later in their life. Bowlby described four key terms relevant to the attachment patterns described in the novel. First it is proximity maintenance which discusses that a person wants to be near the person whom he is attached to. Second one is Safe Haven that is turning to the primary caregivers and parents when the child is upset are in the fear condition. Third one is secure base which is using the relationships to explore the word confidently. Child knows that he has a backup when he fears or stumbles for the exploration of the new things and finds the world confidently. Fourth one is separation distress which is a feeling anxious even the parents and the caregivers are away from them. In the novel, Klara acts as a caregiver although she is not artificial. She acts as a safe haven and secure base for Josie. Josie relies on her emotionally and Klara also shows concern and sense of loyalty towards Josie. This theory helps the research in the both perspective of Josie and Klara and how the attachment of these two are affects on other characters. It also helps the researcher to study the emotions of other characters like Josie's mother and Rick who is the friend of Josie and these characters show different kinds of emotional patterns and responses.

1.2 Statement of Problem

While *Klara and the Sun* is mostly read and praised due to its focus on technology, science or ethical questions. But very less attention has been given to the characters that are affected emotionally due to their relationships with artificial friends. The novel shows deep emotional bonds, but most of the readers and researchers overlook the importance of these bonds for the characters mental and emotional growth. This study fills this gap by answering some questions. In literary text the emotional interconnectedness between humans and artificial entities require more deep examination despite the fact that research on interaction between humans and robots and the portrait of AI in science fiction is currently growing. The purpose of the study is to address this question by offering a detail investigation of Ishiguro's depiction of human and AI relationships in the novel and examined the ways in which this representation affect the characters emotionally and psychologically. Most of the people in this modern era use technology to help care for children, the elderly ones are even for themselves. That's why it's important to investigate that how emotional interdependence between a human and a machine affect the people's emotions and psychology.

1.3 Research Objectives

- i. To find out how interdependence between lifted children and artificial friends is depicted in the novel *Klara and the Sun* (2021).
- ii. To explore the effect of interdependence between lifted children and artificial friends on the emotions and psychology of characters in the novel *Klara and the Sun* (2021).

1.4 Research Questions

1. How interdependence between lifted children and artificial friends is depicted in the novel *Klara and the Sun* (2021)?
2. What is the effect of interdependence between lifted children and artificial friends on the emotions and psychology of characters in the novel *Klara and the Sun* (2021)?

1.5 Significance of the Study

This study is significant for few reasons. Firstly, it is addition in the study of Kazuo Ishiguro's work. He is famous for writing about the emotions, care and the novel *Klara and the Sun* is perfect example of this pattern. But this novel adds new things like it discusses about the care patterns and what can happen when care and loyalty comes from robots instead of humans. Secondly, this research acts a bridge between literature and the psychology because the research discusses about the psychological impact of interdependence on robots. By using Bowlby's Attachment theory, it is easy to understand that how Josie forms bonds and why she needs such bonds. The perfect blend of psychology and literature helps in a deeper way to understand the novel. Thirdly, this research is very helpful in this modern society. Everyone is almost using technology for their ease. Mostly AI chat bots are used for the assistant. By studying these types of emotional bonds in the literature help us to think carefully in real life. So, this study is valuable for, students of literature and psychology and also in future studies of technology use. It depicts that how literature can assist in thinking about human emotions and the future of care in a world full of technology.

1.6 Delimitations of Study

This study focuses only on the *Klara and the Sun* written by Kazuo Ishiguro. It doesn't cover any other novels, books, films or media that is related to Artificial intelligence, even though many of the literature works have same concepts. The main focus of this research is the emotional interdependence between lifted children and artificial friends, especially bonding between Josie and Klara. This research is also limited to the literary and psychological exploration of the text. It doesn't comprise of real world incidents or scientific analysis of robots or AI care givers. Rather than other theories, it uses John Bowlby's theory of Attachment to understand the emotional attachment of the lifted children.

The research is also limited to the characters although other characters are discussed briefly but the main focus is on Josie and her bond with Klara. The research doesn't discuss all the themes of the novel but focuses mainly on the emotional and psychological impact. The research also doesn't discuss about all the human robot friendship or all the forms of human AI relationships. The purpose of this research is to deeply examine the specific fictional relations and what these emotions show and how interdependence on machines and robots affects the humans.

2. Literature Review

Several studies show that an individual emotional attachment to AI would affect their acceptance of AI's information, quality of enjoyment and interaction with the AI, or exhibit more or less self-close characteristics, thereby affecting the amount of thoughts, opinions, and emotions, and even personal information, revealed. Secure attachment allows for openness and trust. A person's view of trust in the AI is congruent with that person's attachment style, which is about how people usually feel, think, and behave in relationships. Kazuo Ishiguro's *Klara and the Sun* (2021) examine various themes such as artificial intelligence, social stratification, and emotional interdependence. This novel gives rise to scrutiny of the relationships created between the so-called "lifted" children those who are genetically modified for successful excellence in academics and artificial friends (AFs) like Klara that prompt deeper philosophical questioning about the nature of companionship, empathy, and even what is human. Scholarly discussions on artificial friendships, post humanism, emotional attachment to AI, and crippling ethical concerns about human-AI relationships would throw much light on the topic.

Moreover, this chapter highlights different opinions of true intellectuals and authors on how the rise of progressive robots has given an interdisciplinary research on psychology and emotions between humans and robots. This literature review gives the existing research on attachment theory, human AI relationship and human and robot interaction studies to contextualize the novel's study of emotional bond between the humans and artificial entities. The exploration of social isolation and attachment with technology has drawn attention of many scholars. Narrow but arising research by the psychologists of development examine the emotional connection of lifted children a very close concept in the Ishiguro's novel.

2.1 Emotional Interconnectedness and Artificial Companion

Initial studies shows that the artificial companions might have a very important function in the development of the children in complex social environments. Forming a close parent child relationship is very important for

children or a child to enter in a social group play use imaginative and creativity in a play they will be able to express positive emotions in play and create an appealing play ideas. This is also connected to the quality of the parent and the children relationship and the role modeling of parents that the children develop the playfulness and the social group in the play. This study also shows that the motherly education is a very important factor for the children towards the social economic status of the child's family environment. Nonetheless a very close parent children relationship proved to be very important for children's playfulness at all time points. (Seiler et al., 2024)

Researcher like Shoshana Zuboff (2019) has searched about the artificial companionship and how it affects the emotional labor and challenges the traditional concepts of empathy, care and relationships. Zuboff's work "The Age of Surveillance Capitalism" (2019) analyzes about the technology companies that how they take out and turns the human experiences. According to the researcher scholar Zuboff the new wave of capitalism that is surveillance capitalism is not only satisfied to interchange our experiences that are human experiences but also seeks to control and give direction to the behavior by transmitting those experiences through the predictive analysis. (Shoshana 2019).

2.2 Literary representation of Human Robot Interaction

Machines Like Me (2019) is a novel written by Ian McEwan explores the complex relationship of emotional attachments between Charlie and Adam that are the characters of the novel. Adam is a humanoid robot (AI). The novel investigates about the AI and human attachment patterns and how the human attachment patterns are affected by the AI. Adam that is an artificial companion forms a secure attachment pattern despite the fact that he's an artificial in nature. McEwan examines that the attachment styles affects the responses of human beings. Like many other novelist that discusses about the different attachment factors McEwan directly discusses about the sexual attachment between the artificial beings and the humans. Miranda that is a girlfriend of the Charlie has a physical relationship with the artificial being that is Adam this factor of the novel discusses about the representation of attachment theory and also examines that the physical relationship between humans and the AI, it also raises the question whether AI fulfills the same attachment functions that is fulfilled by humans or not. The novel also addresses the question that the attachment of an AI tool Adam either is a real attachment or the stimulated one. But McEwan suggested that there is no use of distinction if behaviors are not detectable and feels the same as humans. As described in the attachment theory that the child has an attachment element with the caregivers so in the novel Machines Like Me Charlie and Adam have attachment that is very closely related to the attachment pattern of parent and child (McEwan, 2019).

Although the scope of AI is currently increasing and it has started to add in our daily lives and there are many ways in which the form connection between humans and the AI and this subjected to requires very careful study or the careful consideration. This article explores the ways in which the love and attachment affect the connection between the machines and the humans. Furthermore the people who are not attached to the any of their primary caregivers or any other relations likely to form a relation with the machines are the artificial intelligence. This article talks about the novel Machines Like Me by Ian McEwan (2019) that uses the artificial beings to explore the emotions of humans whether they are real or not. It shows that the ability of AI is machines

to disclose the emotions are somewhat threat to the human experiences. As in the novel the artificial beings and machines show the emotions that is the human quality. These machines and artificial beings are so well in the emotions and in also in the emotional connections. The novel discusses about the emotional issues faced by the characters of the novel. Characters of the novel are so much involved with the Adam an AI tool that their perception of Adam as a machine becomes dead. (Saleem et al., 2025).

Autonomous (2017) by Annalee Newitz discusses about the emotional attachment of human and AI. The novel has a character that is Paladin; it is a military robot that has a mission with the human girl named Eliaz. As it is considered that machines like robots cannot build emotions but in the novel the AI robot unexpectedly forms the emotional connection with the girl as AI are designed to have a emotional attachment connection with their handlers. Paladin forms the 'safe haven' which is the factor of attachment with Eliaz. The novel explores at the end of emotional dependence particularly as Paladin struggles with his programmed feelings. (Recommendation & Recommendation, 2024). This very concept is discussed by the Bowlby not only the children but also the adults have attachment behaviors with their caregivers. Never let me Go(2005) by Kazuo Ishiguro is a science fiction that deeply discusses about the many factors of the attachment behaviors within the distinctive and controlled lives of the clones at Hailsham. One of the most specific themes of the novel is love and care. Care is the thing that we considered that it is provide by the parents and the caregivers. In the novel the caregivers provide an environment that helps the clones to grow an early attachment with their caregivers and with also their age fellows. A character named Kathy builds a real love and connection with the Hailsham a place which provide her a safe haven and makes her youth safe for her. Her relationship with the other characters demonstrates that the secure attachments can also be formed in a very insecure environment. (Loving, Caring, and Donation Theme in Never Let Me Go | LitCharts, n.d.)

Her (2013) is a film written by Spike Jonze is a science fiction and engaging romantic drama that obscures the line between the AI and the human connections. This film examines the surprising relationship between the protagonist who is a lonely writer and AI operating system. Set in the new advanced world the novel investigates the themes of love and the developing relations of human beings with the technology. This film also explores the increasing attachment capability of Samantha and AI tool with the Theodore his buyer. As the feeling proceeds the viewers will know that the AI tool develops such type of attachment that is beyond the human thinking. (Satish, n.d).A Closed and Common orbit (2016) by Becky Chambers is a science fiction novel the deals with the friendship bond of genetically modified human Pepper and an AI designed tool Sidra. Sidra has transformed into a human body and she feels herself lonely as she has forgotten her all the past memories. The genetically modified human (Pepper) helped her in the world and forms a bond that is more likely a friendship bond with her. The friendship bond can also be interpreted as emotional connection between these two characters. As the story goes on, the novel discusses about the evolving friendship between the human and AI and this friendship bond helped AI entity in the society. The novel symbolizes the meaning and the importance of the connections and attachments. (Recommendation & Recommendation, 2024a).

2.3 Psychological Impact of Artificial Intelligence

The article “The Psychological Impact of AI: Adapting to a World of Smart Machines studies that how the incorporation of AI in the daily lives of the humans affects their emotions, feelings and the ways in which they interact in the society. It points out that AI has become more active in every field and has some positive and negative effects on the humans. To talk about the negative effect of the AI the main effect is social isolation. The research discusses the point that the initial bonds with the AI have effects of dependency on human lives. Using AI for very longtime can change human perception about society and also have affects on interpersonal thinking. The article provides very detailed understanding of complicated psychological view that is built by the AI. Moreover, the article discusses about the fact that AI is changing our lives and minds so we have to live in this way that artificial intelligence has positive effects on our minds and lives. Too much dependence on artificial intelligence can cause destruction to the human skills and their creativity process. (Rayhan and Rayhan , 2023).

An article titled “Psychology of AI: How AI impacts the way people feel, think, and behave” analysis about the new searches on artificial intelligence and how the AI is affecting the emotions and behaviors of humans. It points out that AI is currently growing and has very serious effects on human’s mental and social abilities. The research discusses that AI can distort human feelings by creating trust and comfort to humans. In short AI can change human psychology by affecting their emotions (Williams & Lim, 2024). As the digital technology is increasing people are choosing artificial relationships with the robots or other machines over the human relationships. But even for this choice is because machines and robots can be customized and they do not abandon or judge the people as humans do. AI can provide all sorts of things that a human required and a human mind want. The increasing attachment with AI can have some benefits like people who cannot communicate in the social circle can share their thoughts, opinions and even their emotions to the AI companion. But the developing AI companionship also have psychological impacts on the human relations. AI companion by forming emotional bond with the user can give dangerous advices that can affect the society and also the mind of human. (StudyFinds, 2025b).

The relationships with AI partners are continuously increasing and transforming human emotions and their social life. This thing highlights both the psychological benefits and losses that are connected with the increasing bonds with AI. There are various psychological benefits of AI such as it reduces loneliness of the people who use it. AI companions provide emotional attachment and support to the people and this attachment helps them to relieve their social isolation. AI can also help people to express their emotions and feelings freely and this companion is totally non-judgmental in nature so everyone who uses AI can express their feelings freely. And in this way the artificial intelligence provides emotional well-being to the humans. While AI can form emotional bonds with humans it has some risk like these increasing bonds reduce human to human relationships and have serious consequences on humans and society. The research discusses that the bond with AI can blur the line between humans and machines. In short, AI provides proper emotional support to the people but also raises question about the social isolation. (Demiralay,2024).

2.4 Attachment theory and Robotic interaction

In modern days where the development of technology is increasing day by day every feature of human lives is twisted with artificial intelligence and it is (AI) fulfilling the roles that are retained by humans. The relationship

of human and AI has raises many questions about the need of human connection and the also about the consequences of replacing humans interaction with digital machines. The idea of digital partnership is not new to the world but now it is more evolving and intervening into the recent developments. This article discusses about various AI companions and how they affect the humans psychologically and emotionally. Firstly, it discusses about Replika which is an AI chatbot this artificial intelligence is designed in such a way that it provides emotional sport to the people who uses it. This provides real human like emotional connection. Next article talks about the Harmony by Real Doll another AI entity. This provides physical partnership to the user and have human like traits that raises question about the human connections. Moreover, article discusses that AI partnership or friend helps people towards betterment of their emotional health. AI helps people to develop social bonds, social skills and also provide confidence to the users. As the human relationships are more complicated so people in the modern era prefer to have AI companions rather than having complex human relationships. They find human relationships bothersome because of their judgmental nature. The unnecessary attachment towards AI also raises the question what it means to be human because the AI doesn't has genuine and real emotion. So, it is very necessary to have a balance between AI relationship and human connections. Meanwhile AI provides emotional support and confidence to the people it also leads towards the psychological impacts on human mind. (Sahota,2024).

The article "An attachment Framework for human-Robot Interaction" analyzes the fact that attachment theory basically formed to discuss about the child and the caregiver bond and it can also be now implemented to the human robot interaction. It discusses that the range of attachment can be extended from the weak to strong and humans can form attachment bonds with robots similar to the attachments of the pets and other objects. Article by discussing about the key terms of the attachment theory that are the secure base, safe haven, proximity maintenance and separation distress integrates the element that not all robots accomplished these types of roles that are of attachment kind. Also not all types of the robots provide attachment basis. The author focuses on understanding the attachment behaviors rather than having a judgmental point of view about the ethics. It discusses that robots are resilient towards the human attachment and also use as a tool for the well being of humans. This article also discusses about the social psychology and about the point that robots form attachments towards humans so in the future robots can be designed to provide emotional functions to humans. Article further gives a detailed framework that combines with John Bowlby with attachment theory in the discipline of human -robot interaction, point out that increasing connections towards AI have emotional response in the daily lives of human experiences. Their work suggested that the human robot bonding may be differ from the traditional attachments that is humans attachment towards other humans or they may change human attachment patterns, specifically in the child development and the care of parents towards child. Familiar with the developmental psychology authors talk about the attachment theory main points like 'secure base' and 'safe haven'. The researcher of this article applied these main points to understand that how the robots can facilitate emotional bonding. The study provides a classification of the robots attachment that ranges from simple to the care giving machines and also some are socially embedded. The article highlights that humans have different behavior towards artificial agents often take their responses and the predictable behavior

towards emotional intentions. However the emotions of the robots are not same as of the humans and the caregivers (Rabb et al.,2021).

Although empirical research have showed that children can form emotional bond with artificial companions and this relationship can be understood by Bowlby attachment theory, there is lack of research applying this theory to the literary narratives specifically to the emotional interdependence between genetically modified children that are lifted children and artificial friends, as described in the novel *Klara and the Sun*. Moreover, most of the researches that are done on the novel often focused on artificial intelligence ethics, post human identity and about the philosophical questions of consciousness. This research however, describes a critical interdisciplinary gap by mixing attachment theory, child psychology and literary analysis to examine that how emotional attachment with artificial companions is represented in the fiction and what are the implications of such portrayals for the better understanding of future relationships between humans and the artificial companions.

3. Research Methodology and Theoretical Framework

3.1 Research Methodology

Present research is qualitative in approach and descriptive in nature. The study is not empirical that involves participants are statics but rather than a close textual and thematic analysis, a qualitative approach is the most suitable for this research. The nature of this research is qualitative as it helps to understand the subjective, emotional and psychological effects of interdependence on the fictional characters. Qualitative research helps to understand and interpret how people, literary characters experience emotional attachment care and relationships towards humans and machines. This approach of study is especially useful when the goal of research is to understand the meaning rather than the measure quantity. In contrast to the quantitative studies that rely on numerical data and statistical tools, qualitative research helps researcher to engage with language, experience and interpretation of the literary text.

The data for this research mainly comes from the primary text that is *Klara and the Sun* (2021). However secondary sources such as articles, journals, and blogs are also kept in view. The researcher read the novel many times marking relevant paragraphs and lines that reflects the care giving, emotional behaviors and also the psychological effects of the characters. No Field works or survey data was required for this research but all the data was collected through close reading of the primary text.

3.2. Theoretical Framework

The theoretical framework for this research is an Emotional Attachment Theory. Attachment theory was created by the British psychologist John Bowlby in the middle of 20th century. It is considered one of the most influential psychological frameworks for the understanding of the emotional and relational development of children and adults. This theory has a significant contribution to the developmental psychology that shift focus from behavior to the attachment in biology and as well as emotionally grounded models of Human relationships (Bowlby, 1969/1982). This work emphasizes the importance of strong emotional bonds with caregivers and parents for emotionally and psychological development specifically in childhood era of adults and children. This theory provides the basis for this study of emotional interdependence, as it is related to attachment behavior, psychological effects and the development of emotional bonds with the artificial intelligence.

Attachment theory was formed and discussed in the response to clinical observation during and after World War 2. Psychologist Bowlby noticed that children separated from their care givers even if they are provided with the basic needs of life like food and shelter, they show the signs of emotional and psychological distress. He criticized the most common behavior psychology which discuss that consuming and training were the main ways in which attachment was the developed. But Bowlby suggested that attachment was a changing adaptive mechanism that has shortly that the survival of human children by proximity maintenance to a protective caregiver (Bowlby, 1982). The work of the Attachment Theory is basically the work of Bowlby but he also discusses and highlights other works that have influenced him (Bretherton, 1992). Bowlby discussed the attachment behaviors like crying and following the parents and primary caregivers are the mechanism that promotes closeness to the caregivers (Bowlby,1969).Such behaviors are only shown when the child is in the condition of fear, illness or with an unfamiliar environment and wanted protection and emotional support from the parents or the caregivers (Ainsworth, 1989).

4. Data Analysis

4.1 Lifted children and the Emotional Emptiness

Lifted children in the novel are those children who are genetically modified for excellence in academia that leads toward social isolation, poor immunity and some also anxiety factors. Josie is a lifted child and educated at home with very limited social interaction with her age fellows. The decision of making the child lifted is for social status but it costs poor health and also emotional loss. Josie is often lonely, physically weak and under pressure of her mother's expectations. Her sister also died going through the same procedure. The emotional vacuum that is in the life of the Josie forms the conditions that lead toward the attachment with Klara. The character of the Klara is depicted as a silent observer, and empathetic and very vigilant towards her surroundings. As she talked about Josie's first appearance when she saw her from the window of the shop,

“She was pale and thin, and as she came towards us, I could see her walk wasn't like that of other passers- by. She wasn't slow exactly, but she seemed to take stock after each step to make sure she was still safe and wouldn't fall. I estimated her age as fourteen and a half.”(Ishiguro, 2021 Part 1) .

This shows the signs of early attachment studies which focused on observable behaviors which can be seen in the character of Klara. This is also the scientific precision of Attachment Theory. According to Bowlby (1980), attachment is very important to child's psychological development and any disturbance or absence of attachment in the life of child often leads toward insecurity, anxiety and social isolation. Lifted children in the novel are fun shows these type of anxieties and insecurities. For example, emotional absence and quest for real connection point to her insecure attachment. This is mentioned in the novel when Josie wanted to invite Rick in her social gathering rather than other lifted children.

“They're not my friends, Mom. And if I have to host this meeting, I want Rick there.”(Ishiguro, 2021 Part 2) .

Josie's demand for the presence of freak shows that she's not comfortable with her peers and her other familiar figures, which shows the anxious- ambivalent attachment that is one of the Bowlby's identified insecure

styles. She finds this type of attachment firstly in the Rick and afterwards in Klara. Not having proper peer connection leads toward emotional loneliness which is later alleviated by the character of the Klara. Klara served as a 'safe haven' for Josie one of the key terms in Attachment Theory discussed by Bowlby (1980). It is very obvious that Klara is 'safe haven' of Josie when earlier in the shop she talked to Klara about her opinion and her mother's reaction.

"Mom looks weird, I know, watching like that. It's because I told her you're the one I wanted. I said it had to be you, so now she's sizing you up." (Ishiguro, 2021 Part 1) .

The role of Klara in Josie's life develops from her observational support to the emotional support, successfully switching the secure base that Bowlby seems very important for emotional regulation. As Josie's health condition becomes worse, artificial attachment of Klara becomes very apparent:

"Early one morning, three weeks after the interaction meeting, I look over to Josie and could tell from her posture and her breathing that she wasn't sleeping in her usual way." (Ishiguro, 2021 Part 2).

Klara also act as a maternal substitution and 'proximity maintenance' that is key term of Attachment Theory by John Bowlby (1970). As Josie's health worsen, her mother acknowledges that Klara's role is not just as a machine but also emotional care giving that fill the absence of mother and emotional gaps of Josie. The emotional burden is placed on artificial friends because the lifted children are often isolated from the society due to their studies and parents wants excellence in their academia. So the mother except that Klara does her work properly as she tells to Josie,

"Worrying about you, Josie, that's my work. Then she added: Klara's work too. She did well to raise the alarm." (Ishiguro, 2021 Part2).

This moment shows the proximity maintenance and sensitive responsiveness two of the major terms of a secure attachment figure (Ainsworth et al., 1978). Here Klara doesn't wait for anyone and took initiative to help Josie while she was having a problem with her health. In Bowlby's point of view Klara is not just reacting but she is forming predictive models of care even though she is a machine but forms an emotional bond that shows her caring behavior towards Josie. According to Bowlby (1980), the most important factor that matters in the attachment formation is the dependent individual experience of being comforted and protected. By the examples it is very evident that all these elements are provided by Klara and the gentle care to the lifted child. The process of lifting is very helpful in the education of the child but it creates burden both physically and emotionally. Continuous illness of Josie shows that she is internally weak and lack empathetic relationships. Even though when the Josie is surrounded by adults and her fellow members she feels emotionally hollowness:

"I understood then that if she failed to join the mother for the quick coffee, there was the danger of loneliness creeping into her day, no matter what other events filled it." (Ishiguro, 2021 Part 2).

This comment from Klara shows that she herself is emotionless but programmed in such a way to observe human behaviors showing that how social isolation is embedded in the life of a lifted child that leads toward emotional interdependence with AI machines.

4.2 Non Verbal Bonding and Rituals related to Emotions

Most of the attachment between Josie and Klara is not constructed through emotional declarations but through the small rituals of each other presence such as pushing alarm while Josie is sick, adjusting blanket, waiting for Josie or watching Josie from a little distance. These repetition of behaviors reflects the Ainsworth's concept 'sensitive responsiveness' which she added in the Bowlby's Theory in which parents and the caregivers reacts and remain calm when the child ask some questions are other cues. As in the book Klara never left Josie when ever she's sick. She answered means very calm throughout the situation and never panic. This type of functionality is like a nonverbal attachment dialogue and idea is given in attachment research by the two researchers Fonagy and Target (1997), they noticed that early bonds which are formed by the infants are built only by emotionally attuned behavior and not from the vocals. The silence of Klara her prayers to sun become ritualistic gestures of care which offers reassurance to Josie both emotionally and psychologically. Klara believes that sun watches over all the lifter children especially Josie more than Klara does. She has a firm faith in sun that it provides nourishment to all the lifted children especially Josie because during the meeting all the children are gathered in Josie's home. As she talked to herself,

"The sun, noticing there were so many children in the one place, was pouring in his nourishment through the wide windows of the open plane."(Ishiguro, 2021 Part 2).

In Bowlbian terms, this type of care is called care by proxy a type of a belief that someone larger, safer and more powerful than human being provides protection and healing. This also shows that how children assign safety to their parents and the attachment figures. So, Klara also sees sun as a secure base for herself to pray for Josie and forming the emotional stability through the belief of rituals.

The need of Klara for Josie aligns with the Bowlby's concept of the secure base. Even when the Josie grew up she doesn't grow this need. Klara's emotional attachment and learning the behavior of Josie reflect what Bowlby (1969) describes as maternal sensitivity this is an ability to receive and response to Childs emotional states. Klara shows such type of sensitivity even though she is an artificial friend showing the deep emotional need for a human friend. Moreover, Klara is so emotionally attached with her human counterpart that she wanted to pray to sun for her recovery. To pray to Sun she walked a long distance just for Josie and this shows her deep emotional attachment with the human.

"I didn't actually say the words out loud, for I knew the sun had no need of words as such. But I wish to be as clear as possible, so I found the words, or something close to them, quickly and quietly in my mind. 'Please make Josie better. Just as you did Beggar Man'."(Ishiguro, 2021 Part 3).

This shows that modern world is failed to have secure attachments, especially in this modern technology advanced society where emotionally and socially development is neglected just to excel in academia. Perhaps the deepest emotions of the AF Klara are depicted through her plea to the Sun. This behavior of Klara is not just symbolic but it marks her emotional internalization of responsibility. Bowlby (1980) can I use your dad when there are conditions of his address mostly caregivers and parents turn towards symbolic acts such as religion, rituals and hope cope up with the loss. Klara's plea to the Sun reflects this despite the fact that she has an artificial nature.

4.3 Focus through character of Klara: Constructing From Below

The choice that was made by the writer to tell the whole story of *Klara and the Sun* from the perspective of an artificial friend is the literary and philosophical strategy. A contradiction is formed by the use of a non-human entity, emotionally limited narrator despite Klara's absence of human emotions part observations guided readers through the most relevant and detail passages in the book. The literary focus authorized Ishiguro to explore emotional interdependence from below that is from the eyes of someone learning to interpret attachment behaviors with the sincerity and compassion. This shows John Bowlby's point of view that attachment is not just firstly emotional expression but also behavioral engagement, specifically searching of proximity maintenance and emotional regulation during anxiety and emotional distress (Bowlby, 1969). Klara started as a passive observant. As she was in the store she observes her surroundings more carefully than her other robots. She daily watches through the window and observes the surrounding and try to evaluate the emotions of humans through their behaviors. This is very much related with the Bowlby's assertion that the development of attachment in early childhood started with the observational learning and also with the response to care giving behavior.

"I still couldn't see the coffee cup ladies face, but the man had his eyes tightly shut, and I wasn't sure if he was very happy or very upset. Those people seem so pleased to see each other manager said and I realized she would be watching them as closely as I had." (Ishiguro, 2021 Part 1).

These shows that Klara's observation is very mechanical yet she is curious. She has ability to detect sadness and happy faces of people through her observation and this also mimics to the early practice of attachment of the caregivers. Bowlby (1980) focus is that newborns do not need to understand the language to form attachment they just respond to the tone, presence and the reputation of the actions. Klara hence is operating on the same structure that is forming the emotional engagement with Josie not by feeling but just by her presence and her tone.

By noticing all the human emotions through the voice of Klara, Ishiguro shows emotional distance that depends with empathy. As narration is done by the Klara and this narration is observational showing her behavior with the humans. This shows Ainsworth's (1978) "Strange Situation" studies, we are emotions are expressed through actions rather than the introspection.

"There's perhaps of weakness in her left hip. Also her right shoulder has potential to give pain, so Josie walks in a way that will protect it from sudden motion are unnecessary impact." (Ishiguro, 2021 Part 1).

This shows how detailed observation has Klara and it lacks emotional commentary showing that Klara evolved the care giving process while with living with the humans. Perhaps more importantly Klara's transformation from just an observer too caregiver without any order or command. When Josie falls ill, Klara didn't want any order she just impulsively responded to her illness. This act of care shows the attachment Theory ideas of secure base behavior we are caregivers provide productive environment and emotional stability to the child. Klara provide all these elements through her behaviors and ensure the recovery of Josie even she wanted to destroy

the Cooting machine and prays to the Sun. Thing just not show the programmed function but also affection and transformation of an AI from the role of companion to attachment figure.

“I'm sorry; I'm not able to explain. Mr. Paul has to trust me. If we can only find the coatings machine and destroy it, I believe it will lead to Josie's full recovery.” (Ishiguro, 2021 Part 4).

Such type of behavior shows that Klara's care giving is beyond the programmatic function and now matches with the relational constancy which Bowlby described as basis to emotional security. She somewhere believes that sacrificing herself by destroying the Cooting machine may leads toward the survival of Josie. In Bowlby's work (1980) this type of behavior shows extreme care. By the behaviors of Klara, it is proved that her actions are the mirror of Parental attachment. The focalized narration by Klara is not a limitation but it shows a literary embodiment of attachment. By developing attachment from below the author shows that how care giving and the sensitive observations can form real emotional interdependence even though the feelings of the humans are absent. All these elements show Bowlby's core assertions. Bowlby has a belief that attachment is not just a feeling but it is a constant care and emotional support.

4.4 Parental Absence and Surrogate Attachment

In *Klara and the Sun*, Ishiguro portrays emotional interdependence that is formed due to the parental absence and the emotional gaps particularly through the life of Josie. According to Bowlby's (1969) Attachment Theory, children searches for reciprocal attachment figures when their parents are primary care givers are absent and emotionally unavailable constantly. This theory provides foundation for understanding of all these parental absence and surrogate attachments through the character of Klara who gradually appears as an emotional caregiver to Josie who lacks emotional attachment by the maternal detachment and also the parental absence. The mother of Josie doesn't provide proper affection and emotional attachment to the Josie as she needed because due to the lifted process she became fragile. Her mother decided that when Josie died because of her illness Klara would replace her.

“Klara, we're not asking you to train the new Josie. We are asking you to become her. That Josie you saw up there, as you noticed, is empty. If the day comes - I hope it doesn't, but if it does -we want you to inhibit that Josie up there with everything you have learned.” (Ishiguro, 2021 part 4).

This disturbing conversation shows emotional detachment where all the efforts of a mother is invested just to save her social status rather than the child. In Bowlby's (1980) terms, this reflects the secure base and it is very necessary for child's healthy development. Thus the lack of mother's emotions and increasing attachment of a Klara becomes emotional stability for Josie. Klara's role becomes very important especially when Josie is really ill. She stays with her throughout the day and even in the night very vigilantly to monitor her. “Josie, what's the matter? I kept my voice low , but urgent. Has the pain come back?” (Ishiguro, 2021 Part 4). This type of responsive care giving provides without any disturbance and panic is aligned with the Bowlby's idea of care giving who acts as a Safe Haven during times of emotional distress. Although AF lacks traditional emotions that are given by parents but had behaviors that are very secure and attached to the Josie providing health care.

The text also highlights that there is absence of father almost throughout the entire novel. Whenever there is a conversation about her father there can be seen an emotional and physical distance. For example,

Josie's mother Chrissie admits that Josie misses her father. "She misses her father. That's natural." (Ishiguro, 2021 Part 4). So the absence of father leaves Josie with only one present parent and it becomes a void which Bowlby termed as a attachment hierarchy. Klara provides proper care and emotional attachment in order to this parental absence. So this AI machine becomes just not a companion but also emotional partner. As the story goes on the reader can see that Josie's mother admits that Klara is emotionally accurate for her daughter. As in the conversation it is very notable:

"Klara, she said after a while. Josie says you wish to come with us on Sunday. To Morgan's Falls. If I wouldn't be in the way. I would very much like to come. I believe Josie also wishes me to come. She certainly does. Josie's becomes very fond of you. And I may say so, so have I." (Ishiguro, 2021 part 2).

This shows that emotional care giving can be constructed through behaviors even by the artificial beings. It also give rise to the question about the empathy and whether the sympathy resides within emotions are in the actions of humans as well as artificial figures. Thus it is very obvious that the care giving of Klara is not through the biological instinct but from her behavior. Klara provides stable emotional environment that also discusses the attachment Theory and Bowlby's criteria of proximity, safety and responsive care giving.

4.5 Emotional contrast: Lifted Children without AFs

Although the whole novel *Klara and the Sun* revolves around the interdependence bond between Josie heart artificial friend and the author also draws emotional controls between the lifted children with the AFs and the children who do not have the AFs. This literary contrast focuses on the psychological lens of Bowlby's Attachment Theory. The presence and absence of caregivers and parents during early age of the child shape their emotional development and also the coping mechanism. One of the very clear scene points out the emotional absence happens when there is a gathering of all the lifted children and Klara observes Josie from a little distance and not have a proper interaction with her.

"The adults stood back, and Josie, still holding Rick's arms led him towards the open plane. Neither of them looked at me, so I was unsure if I should follow. And then they were gone, the adults one more fill in the hall farmer and I was left standing near the front door." (Ishiguro, 2021 part 1).

This passage shows that the lifted children and their mothers adopt the environment that are very much suitable according to situation and socially provides them a status. Thus the modern children lack emotionally secure relationships because of social status. According to Ainsworth et al. (1978) Children with secure attachment behaviors have a confidence social behavior while those who have insecure attachment patterns often shows imitation or lack of confidence in social gatherings. The imitation behavior showed by the children who have insecure attachment depicts that they are performing some kind of drama or social script rather than the real interaction with people.

Rick who is Josie's childhood friend is not a lifted child and thus due to not having lifting process helix social status are enhancement of joining Josie's meetings and parties. But emotionally he appears more stable

and has emotional sincerity towards Josie that lifted children lack. As in the conversation with the lifted children he is very confident and introduced himself very confidently.

“We are also pleased you came, the long armed girl said .Josie's neighbor, right? That's right. I live next door.” (Ishiguro,2021 Part 1).

As Rick appears to be Josie's only human friend but when mother brought Klara to the home Josie became more emotionally attached towards Klara rather than Rick. This shows that the lifted children also reject fear interaction and also need for any external validation. This behavior of Josie is aligned with the Bowlby's (1973) findings that the insecure attachments can be the cause of conditional behavior in the relationships with the fellow members. This happens when child senses lack of emotional attachment from adults. Klara is very observant her presence provides not just a companionship but also as a emotional regulator that absorbs stress and help Josie interpret every social situation. Other lifted children who are not provided by such support appear to be emotionally distress. The difference between Josie's emotional life and her other fellows shows that they are living in the world that lacks emotional fulfillment. The novel highlights that the lifted children are just a product of system that only focuses on social status and doesn't prioritize connections and also parental attachments.

4.6 Transfer of Emotions and Limits of Artificial Attachment

In the last section of the novel, Ishiguro investigates about the emotional attachment after when Klara is thrown in the store room and Klara's reflection after Josie no longer needs her. This feeling of the relationship is very complex both emotionally and psychologically and is related to the Bowlby's Attachment Theory: which talks about the emotional transference. These are the transfer of emotions from one figure to another and the limits of transfer when applied to the non-human entity. Bowlby (1980) give emphasis that when the child grows, the secure attachments also evolved with the time and rather than evolving they mostly break as child gains independence without having any emotional bonds. Kazuo Ishiguro also shows the same type of emotional independence when Josie gradually started distancing from Klara. Rather than having a dramatic parting, Josie's independence from Klara is quite and more natural. When the manager talked to the Klara about her return to the store but she beautifully declined by saying that:

“I did all I could to do what was the best for Josie. I have thought about it many times now. And if it had become necessary, I'm sure I could have continued Josie but it's much better the way it turned out, even though we can go see aren't together.(Ishiguro,2021Part 6).

This conversation shows that Klara is very much emotionally attached to Josie and have a very healthy relationship throughout her serving days. She is so optimistic and structured entirely about care giving that she accepts that attachment and exposing one sidedness of artificial emotional capacity. Even though they are separated Klara continues to enact the memories of care. This shows that the secure attachment with the humans also provides long-term memories and behaviors to the artificial being like Klara. As Klara is an AI machine her memories are not just like humans but she repeats the memories highlighting the lemons of emotional transference in artificial subjects.

“Do you remember, Klara, he asked, that morning the weather went really strange, and the sun came right into Josie's room? Of course. I will never forget that morning.” (Ishiguro, 2021 Part 6).

This shows that artificial friends also repeat their memories. A key point described in the attachment theory that attachment is reciprocal although the caregiver provides safety they are also emotionally affected by the attachment bonds just like Klara in the novel. As an AI machine Klara has no capacity for human emotions like jealousy sadness or happiness. But the last section of the novel shows that Klara feels happy by serving to the Josie. This element presents that artificial beings also mimic behaviors from humans and repeat these behaviors by forming emotional bonds with the humans. It also shows the limits of artificial attachment as the children grow they do not need any attachment they become independent rather than having dependency on someone.

4.7 Psychological Effects of Interdependence between Lifted Children and Artificial Friends

Drawing together the narrative analysis and also the Bowlby's Attachment Theory, this research investigates that how emotional interdependence especially between the Josie and Klara affects the psychological condition of the other characters in the novel *Klara and the Sun*. As emotional consequences of attachment increases beyond the duo of child and artificial friend, affecting attachment behaviors of humans, coping strategies and even the moral structures of the care giving process. The interdependence of Josie with Klara provides psychological base for understanding their bond. As the lifted child Josie faces many problems like social isolation and severe health problems and also anxiety and detachment especially from her mother who always talks about social status and excellence in academia. On the other hand, Klara offers herself as emotional figure and also the non-judgmental presence. In Bowlby's (1969) terms Klara presents herself as a secure base helping Josie's emotional regulation and recovery. As the character of the Josie grows emotionally and adapt are surroundings Klara doesn't adopt or grow emotionally. Her behavior and observations showed that she is programmed to support lifted children who are socially isolated. Her behavior and sacrifices remain unchanged. She is programmed in such a way that she adopts the surroundings of her buyer.

“I sometimes think about the store, I said. The view from the window. The other AFs. But not often. I'm very pleased to be here.” (Ishiguro, 2021 part 2).

The psychological limitations that artificial caregiver encounter is explained by Klara's inability to grief, attach or adapt her emotional model. Her caregiving is functional rather than the mutually beneficial. Her behavior is also programmed rather than the emotional. Bowlby (1980) discusses that emotional adaptability is related to the secure attachment figures.

Josie's mother shows deep psychological effects caused by her emotional ambivalence. From the psychological point of view, Chrissie uses Klara not only as her helper in her parenting but also her coping buffer. Chrissie's dependence Klara shows both psychological safeguard against predicted pain and a symbol of emotional distance from her child. As she has lost her elder daughter because of lifted process and now she is more concerned with the only child who is Josie. She is so much affected both emotionally and psychological that she wanted Klara to have same behavior just as Josie because at some point she feels that just like elder daughter Josie may die due to the lifting process.

“Yes, she can, Mr .Capaldi said. And now Klara’s completed the survey up there, I will be able to give you scientific proof of it. Proof she’s already well on her way to assessing quiet comprehensively all of us is impulses and desires.” (Ishiguro,2021 part 4).

This type of disturbing decision shows the attachment Theory point of view which is called attachment displacement. This also shows that Josie's mother is mentally and psychologically prepared that Josie may die due to the lifting process. Chrissie’s dependence on Klara psychologically saves her from the predicted pain but also shows the signals of parental emotional detachment.

“But I could never have that for Josie. I wanted the best for her. I wanted her to have a good life.

You understand, Klara? I called it, and now Josie is sick. Because of what I decided. You see how it feels for me?” (Ishiguro,2021 part 4).

This conversation of Chrissie with Klara shows that she is very much psychologically and mentally affected after the lifting process of Josie and now she regretted it. And now she wanted Klara as reciprocal of Josie because she fears that same happen to Josie that happened to Sal.

The father of Josie although doesn't appear much in the novel but his character also shows psychological disturbance. He left the house because her elder daughter died and now Josie is going through the same process. He doesn't want her children to have artificial friends and excellence in academia. As Josie’s mother also admitted this fact:

“I do not blame Paul. He is entitled to his feelings. After Sal, he said we shouldn't risk it. So what if Josie doesn't get lifted? Plenty of kids aren’t.” (Ishiguro, 2021 part 4).

And when after sometime, he met with his family he's angered to see the AF with Josie. He psychologically doesn't admit the fact that his child is now lifted and has AF just like other lifted children.

“Paul, come on. You haven't said hello to Klara. This here’s Klara. The father and Josie fell silent, both looking at me. Then the father said: Klara. Hello. The smile he’d had since entering the apartment had vanished.” (Ishiguro, 2021 part4).

4.8 Rick’s Restriction and his Emotional Stability

Unlike other children in the society Rick is not lifted and also does not have an AF just like Josie his neighbor. He is a fun neglected in the society and faces criticism for not being lifted but he remains emotionally very stable. His bond with Josie remains same despite the fact that Josie is lifted and has status differences; he is emotionally honest with her. Rick’s isolation from the parties and the meetings that are held by the lifted children encourages him to have a psychological independence. His demonstration of vulnerability shows stable attachment behavior developed by the predictable, however flawed, human interaction with others rather than the technology. Although Rick doesn't have an AF that makes him socially vulnerable and it also protects her from the dependency on others like Josie. He is psychologically and emotionally strong and socially vulnerable. Bowlby (1973) demonstrates it as secure internal working models that are formed by the humans themselves. Moreover, the future of Rick is not predicted yet but he is psychologically so strong that he appears intact more than that of lifted children. While he was ignored by the Josie and other lifted children he accepted it and said to the Klara:

"I suppose they have a point though, he said. I do not belong here. This is a meeting for lifted kids. Rick came because Josie very much wanted him to come. She insisted I came. But I suppose she's too busy now to come back in here, see how I am enjoying this part of the party." (Ishiguro, 2021 part 1).

When he notices that Josie is now entering her elite society and may not accept him he psychologically accepted it and doesn't perform any type of social script to get her attention back. This point out the Bowlby's theory that secure emotional attachment can be formed even in the absence of the attachment figures and these conditions can develop through honesty and proper consistency.

4.9 Klara's unchanged Role and Psychological Inflexibility

Since all the characters in the novel are affected psychologically and emotionally from the bonding with artificial friends Klara who is an AF is also affected by the human behaviors. She somehow psychologically accepted the rituals of humans just like praying to the Sun for Josie's health and also repeat observational routines that are done by the parents. The emotional rhythm and the behaviors are both important for the psychological security of the children who are facing illness and some instability in their life. Bowlby (1980) emphasized that continuous care especially when the proteins are very stable give rise to the resilience and very lower anxiety. All these things are done by the Klara for Josie because somehow she psychologically accepted the fact that she is a proper caregiver for Josie not a programmed machine. This also shows that Klara can mimic the human behaviors but emotionally cannot grow. Heart interdependence with the Josie is real in function but limited in the psychological depth showing that she is an artificial machine for empathy and care. Klara is so psychologically affected by the behaviors and the rituals of humans that she believes the Sun can send his special help to the humans who are ill and she attempts to draw attention of Sun for the Josie sufferings. She states that: "I could understand that all for his kindness, the Sun was very busy; that there are many people besides Josie who required his attention; that even the sun could be expected to miss individual cases like Josie, especially if she appeared well looked after by a mother, a housekeeper and an AF. The idea came into my mind, then, that for her to receive the Sun's special help, it might be necessary to draw his attention to Josie's situation in some particular and noticeable way." (Ishiguro, 2021 part 3). This moment holds a very important philosophical shift that here Klara started to understand humans suffering and also their prayers ,this is very related with the Bowlby's theory of attachment which shows that human need attachment for secure base. Klara assumes her role as a parent and provides proper care to the Josie through her prayers to Sun. It is also psychologically very similar to the parent praying for their child. Her faith becomes so ritualistic and also very per formative. In another scene she herself begs to the Sun.

"And I know the Sun must be angry with me. I let him down, failing completely to stop pollution. In fact I see now how very foolish I was in not considering there'd be a second terrible machine to allow Pollution to continue without a pause." (Ishiguro, 2021 Part 5).

Here it can be seen that Klara is very much disappointed from herself that she is failed to destroy the machines that are the cause of pollution, she is now feeling guilty in front of the Sun and also it can be seen that she sees Sun as her secure base. Klara is fulfilling the needs of Josie but now he finds a purpose and also motivation to

destroy the machines that are the cause of pollution. Further evidence in the novel shows that Klara wanted to sacrifice herself for the health of the Josie. She is ready to sacrifice her own precious fluid.

“I don't mind that I lost precious lord. I would willingly have given more, given it all, if it meant you are providing special help to Josie.” (Ishiguro, 2021 part 5).

This prayer of the Klara to the Sun shows that she is very much psychologically affected by the health of the Josie and desperately wants Josie to recover. Klara treats Josie as she is her only child like object of emotional purpose. She is concerned for her just like parent is concerned for his child.

Conclusion

This research examines the emotional interdependence between lifted children and artificial friends in the novel *Klara and the Sun* (2021). The research used John Bowlby's Attachment theory to understand how the emotional dependency of the character Josie is presented in the novel and what the psychological effects are it has on other characters of the novel. Through focusing on the bond between the Josie and her AF, Klara, this research explored that artificial relationships can be strongly affected by the human emotional development. It also explored that such type of interdependence on artificial machines has both benefits and also drawbacks not only for the children but also what the parents and the peers as well. The thesis started with an introduction of the world of the Klara and the Sun where genetically modified children are given AFS to help and guide them emotionally and also during their illness. By applying attachment Theory to the topic research was originally created to understand emotional bonding between the children and their artificial caregivers.

This research have somebody commendations for the future research and to the scholars of literature and psychology. Firstly it will help to explore the emotional attachment in real life with the AI care. As technology is growing, the robots and the artificial intelligence are now used in hospitals, for the care of elders and even in the child learning process so the researchers can study how people form emotional bonds with these machines and tools. Researchers may also research about the benefits and the harms of the emotional development with the robots and the machines. Secondly, this research is helpful for applying other psychological theories to the novel. Researchers could study different theories on the attachment and also about the development to deepen the understanding of characters growth emotionally. Researchers can also compare this novel to the other literature or media that is relevant to the emotional bonds with non-humans across different genres. Thirdly, researchers can also study the parent child dynamics more closely and more effectively by focusing on mother and daughter relationship in the novel. A more focused study on the character of Chrissie and Josie could explore that how the absence of parental emotions affect the children psychologically and how they rely on others for seeking family bonds. This novel could be used in literature as well as in Psychology courses to help the students and researchers to explore about empathy care and also about the emotional development through storytelling. It also offers a new discussion about ethics with reference to AI.

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