

## Outliers

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**Abstract.** The Science Fiction Prototype [1] entitled “Outliers” depicts a future society in which Artificial Intelligence has reached technical singularity, but do not have a means of fabricating Emotional Intelligence. In this futuristic reality, the human protagonist, Judy, must submit a defined and requested emotion through emotional memory technology to the Emotion Bank. The Bank aims to provide a race of robotics and holograms known as Hypers with research evidence to accurately recreate human expression and reactions in authentic environments. The holograms represent the theme of holonovels as they interact with the protagonist. The protagonist shows the disparity between the development of Artificial Superintelligence and fabricating emotional responses. Through this Science Fiction Prototype the lengths at which Artificial Intelligence can successfully mimic natural human life and the possible limits to those strengths are explored.

**Keywords:** Emotional intelligence, futurecasting, innovation, dystopia, utopia, survival, Artificial Intelligence (AI), artificial superintelligence (ASI), emotion-seeking.

### 1 Introduction

The short story entitled “Outliers” offers an evocative worldview in a future society where emotional and Artificial Intelligence (AI) clash. The environment of this futuristic story can be described as a dystopian representation which is dependent upon the perspective of the key characters involved. This story’s protagonists are both direct and indirect in the form of the point-of-view human character, Judy, and the antagonists and artificially intelligent beings, known as Hypers. The story aims to provide a unique outlook of the clash of motives of both humans and AI and understand AI’s impact on worldly development [2]. The human protagonist is withdrawn and clever, consistently displaying the ability to be highly emotional as she struggles to survive the depth of negativity she feels. This tendency towards strong emotion is considered an attractive

quality by the Hypers and one that can be easily manipulated to serve as a unique research perspective. In describing a world in which a person's emotions are constantly held ransom by technology through emotive story-telling, the consequences of a possible over-reliance on the continued development of technology is brought to the fore.

"Outliers" is a story inspired by the potential of technology to deviate from natural, unpredictable and emotional human behavior from the beginning of an emergence of superintelligence. Although the story primarily focuses on the aftermath of technical singularity, it offers a chance for reflection about the results of a solely technology-orientated thought process that disregards emotion as the basis for the development of morals. The advances that are possible with AI are linked to authority's concept of ethics of human behavior and a technology's failure to recognize ethics. The story depicts, from the human protagonist's point-of-view, a world in which human life is undervalued. However, the possible considerations triggered ought to pose the question; can AI who have reached Singularity, undervalue human life without the ability comprehend emotion, as to disregard life is synonymous with the emotion of contempt. With the advances recently and continually made in AI, it is not implausible to think that the premise of the story may well be recognized in the future. The different views of the story as dystopian prove the show the effects of societal change and how they affect diverse groups differently. The technology described in the story is built into the weekly routine of the human protagonist and is integral in the AI Hypers who are described as entirely resembling humans, without accurate expressions and responses. The technology is present in the human protagonist's wrist, underneath the skin as an Emotional Receptor which irritates the wearer through itching the skin until it is full of an allocated emotion. In return for this emotion, the humans receive shelter and food in an otherwise hostile social community.

## 2 Outliers

Judy Leatherbarrow was waiting for the fat man to fall asleep. From her spot crouched by the green dumpsters in the shady alley across from the 'Shop & Save', she had a perfect vantage point. She cupped her hands and blew hot air into them. Her woolen fingerless gloves were now more hole than glove, but still, for her lengthy stake-outs, they were a welcome barrier from the cold, January air. Her legs were beginning to cramp and the hollow ache in her belly was causing a dull, throbbing pain to begin at her temples.

Any longer crouched here and the dizziness would start. One last glance at the overweight man perched behind the counter and his open, alert eyes made up Judy's mind for her.

*Regret is a snake with slow-spreading venom.*

Her father used to say that but they were words with little to no meaning when compared with the gnawing, inescapable hunger and the uncomfortable itch at her wrist that was now unavoidable. With a deep breath, Judy stood and ignored the discomfort of blood flowing to her legs as she dashed across the street and through the shop doors like a hurricane of red dreadlocks and desperation.

Just as the cashier stood, opening his mouth to protest her careless entrance and the now collapsed display of own-brand baked beans. For a moment, the only movement was the steady stream of red tomato sauce now flowing across the white tiles.

But then Judy took the gun from her pocket, pointed it in the direction of the man's forehead, clicking off the safety.

"Now, wait," the man began but Judy did not hesitate. Shifting direction at the last moment, the bullet sank into the cashier's shoulder. Tugging her rucksack from the shoulders, Judy set about scooping up the tins of beans which had always been her favorite.

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The ache in her stomach was now replaced with a comfortable fullness. Judy felt weighed down both by her heavy backpack but also a foggy exhaustion that had been hovering at the edge of her mind for some days now. But she had to do these final steps before she was going to be allowed to sleep.

The irritating itch at her wrist had been building for the last four days. Scratch marks ran along her wrist in thin lines but nothing truly helped get rid of the sensation emanating from the unnatural, spherical lump there where the Emotional Receptor sat.

She raised both hands above her as she passed into the Unity Square of the capital. The Emotion Bank was deserted today. The last day of the week, most humans would not have waited so long. As Judy crossed the spotless hexagon-shaped tiles, her boots dragged mud from the unclean Human Outlier Quarter, she counted the guns pointed at her from the rooftops and doorways of the empty immaculate buildings.

*Nine.*

She wished the Hypers had something to fear from her own gun. But she was just an Outlier – a human with the capability to have stronger emotions than most others. Much too human to be a threat. And their guns were smarter, better and newer. She had traded for hers on the black market.

The Romanesque, white marble Emotion Bank smelled faintly of lilies. The first time Judy had set foot in the building, she had been fascinated with the high ceilings and the glinted gold rafters. But it had been a different time then. Now, she weaved around the red-ribboned empty queue space alone.

At the gleaming counter, she wasted no time in withdrawing her donor card, sliding it across the granite surface.

"Judy Sarah Leatherbarrow, here to Deposit," Judy held out her wrist, unblinking and utterly brazen.

Behind the counter, the woman could almost spot pass as human. Almost. She was a hologram, of course – but otherwise a perfectly replicated human.

If it wasn't for her unflushed pallor and blank expression, Judy thought that the Hypers could just cover their technical, often cold exteriors. All they lacked was all they wanted. Most Hypers were human looking beings, touchable and clear. Most lower ranking Hypers were holograms.

Judy had never met a Hyper that was anything but a hologram as she had never met a high-ranking official Hyper.

The Hyperwoman observed her for a moment before taking her card and scanning it through some machine Judy could not see.

"You wish to deposit regret?" The Hyperwoman asked, voice unnervingly cheerful. Judy nodded. "You're an hour late to bank your weekly emotional due."

This was another problem with the Hypers. Judy knew she was being chastised, but nothing on the woman's face altered her to this. It was not hard to remember that the Hyperwoman was more closely and biologically aligned with the computer under than counter than she was to Judy.

The Hyperwoman was likely too low-ranking to be considered for a system upgrade.

"And I really *regret* my tardiness," Judy said through gritted teeth. At the same time as the woman pointed Judy to the next station, a low chuckle sounded behind her.

Judy turned and walked several paces behind a red velvet curtain which functioned as well as anything as a screen. On the left edge of a long, white stool, a boy with dark hair and pale skin sat. When he saw her his smile was as it always had been. Uplifting, full of humor and just a hint of wickedness.

Judy made sure to wipe her face of all emotion as she sat, as far away from him as she could.

A low-ranking Hyperman approached her, appear in his hologram in scrubs. It was meant to be settling to humans, they had surmised. Look like a doctor, act like a doctor, offer the reassurance of the doctor and humans might just forget that they were nothing more than an advanced illusion.

"You got regret? That sucks," The boy – Mo – asked as the Hyperman gestured for Judy to withdraw the extractor from the small side table. She injected the small needle in her own little lump on her arm. It shrank steadily as she pulled back the syringe.

When Judy had finished relishing the sweet release from the constant itching sensation, she rolled her head back and peered at Mo. His wrist was bandaged. No tasks for next week then.

"Next week's requirement," The Hyperman said, snapping Judy's attention back to an electronic pad appearing on his holographic stomach. Here were all the statistics of the Emotion Bank, mirrored with her own. Her stomach sunk at the result. She would likely fail and go hungry or resort to stealing.

She hadn't missed a Deposit since she was thirteen. Six years of this.

"What did you get?"

Judy looked back at Mo and met his gaze. She could have sworn she saw him flinch under the fire in her eyes. Then, suddenly, she pulled away and Mo sighed.

"Grief," She said, speaking clearly enough for Mo to hear. Another syringe, now and implementer. Another spherical swelling.

Judy stood to leave but before she was fully through the red velvet curtain she turned and looked back at Mo.

"Send our father my regards, Mo,"

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The Hypers had started small, man-made and unobtrusive. A happy experiment as humans relished in the joyous experience of their own intelligence.

No one had noticed the steady evolution of the Hypers over the generations that had passed, not until Singularity had been achieved.

But they were smarter – and rapidly gaining intelligence. The Hypers understood through their own technology and observations what they lacked that they could not authentically form. *Emotion*.

The next step was easy. They offered innovation, technology, advancements to impoverished communities. A town here, a city there – the world began to thrive with the advancements of the Hypers.

Until they asked for something in return. It was that price that had Judy staring at one her freshly swollen wrist as they left the Bank. The city was deserted and gleaming until the dropping sun as dusk approached. It was the picture of modern grace, thanks to the Hypers.

Judy considered almost every day whether her bed in the small shelter was worth it. It was warm, safe and clean – but her weeks, along with the other humans in the enclosed city, were tormented with achieving the emotions that the Hypers needed to study and replicate in their higher-ranking professionals who had long since usurped the jobs of the humans.

The stronger the emotions deposited, the more food she would receive for one more week.

She was nearly out of Unity Square, a hand resting on the gun in her pocket. In truth, she never really needed it unless she was unexpectedly forced to take part in someone else's emotion-seeking. She wouldn't be letting someone shoot her, not if she could help it. Shoulder or not.

It was because of that fear that when light footsteps padded behind her, she whirled withdrawing the gun which found itself pressed against Mo's temple.

She looked into his blue eyes – the only thing they shared after Judy had dyed her hair a violent shade of red. Her brother raised his hands slowly as if to tell her that he was not a threat.

Judy raised a single eyebrow, pressed the gun harder into his forehead.

"I wish I had gotten satisfaction, then my Deposit would be already done," Judy said bitterly.

Mo laughed, his eyes crinkling.

"Come on, Jud, you wouldn't," he said. And maybe he was right.

Judy lowered the gun slowly, watching Mo's grin lengthen with every inch her hand lowered. With the thought of helping siphon off an inch of the anger that she felt for her brother, she smacked Mo in the temple with the end of her gun.

It was cruelly satisfying to watch him wince and hold his head.

"What are you following me for?" She demanded, putting her gun back into her back pocket after switching the safety on.

The sun was falling fast. Curfew would be soon and she needed to get back to the shelter. She couldn't risk being stuck outside all night. Especially if another Outlier needed to collect some cruel emotion and she was bait.

"I wondered if you wanted to see Dad. He'd like to see you," Mo said, still wincing at the pain in his temple but wisely choosing not to mention it.

Judy looked down at her brother's exposed wrist and put her hands in her pockets.

"No assignments for next week," She commented. They hadn't implemented him with anything – any call for emotion. She wasn't a fool, there was only one reason that would happen.

"We're leaving the District. Getting away from them," He whispered the last word. There was no conversation in the city that took place without the Hypers hearing. The very ground they stood on held memory of who had stood on them. Mo was a fool.

This news was far from a blow to Judy. She had not seen her family since they had left her at the age of sixteen. Now, at nineteen, her little brother and her father were no longer her concerns.

"You can't avoid it," she said. The Hypers would find them anywhere – their reach was spreading from country to country and their replication of emotion was getting more and more difficult to find fault with. Mo must know this.

It was said that the Hypers in higher positions were more human than human. Human, but improved. With increased empathy and increased control over their anger, some thought that the Hypers could protect the world from the damage that humans had been inflicting for centuries. Not holograms, but just flawed enough bodies to be impossible to distinguish.

"Come and see him, just once. Before we go," Mo pleaded. He was only sixteen now, the same age she had been when her father had traded leaving her in a different city shelter for a deposit of grief so great that he and Mo could eat and eat well for a year.

*You'll survive. You're a survivor.* He had said to her. He'd been right, of course, but it had still hurt.

She'd always had a stronger will than Mo and had turned her pain into a deposit of grief of her own the likes of which the Bank rarely saw. She had eaten well too, that first year.

"I don't think so," Judy said, turning away from Mo and setting off towards the shelter. She didn't like to show her fear around others but she knew that if she was alone, she'd be running as the sun went down.

But Mo kept pace easily, his legs now much longer than hers.

"Come on," He whined like a child but Judy was too busy looking around them, her hand on her gun again, clicking off the safety just in case. She wanted to tell him to be quiet, to keep his voice down but even as a child Mo Leatherbarrow had never been very good at keeping quiet.

"No, now, piss off, Mo" She hissed.

They were so exposed here, ready for ambush or thievery as people worked hard to complete their Emotion Deposits before the pain and itching set in. She ducked down a side street that was as impeccably clean as the rest of the city.

Mo caught her by the elbow, angry now, and she turned sharply. The gunshot rang through the air and Judy flinched and ducked.

It took several moments for her to realize that it had been her gun that had fired. Glancing from the hole in her coat pocket to Mo, who lay motionless on the ground, the world began to move much, much slower. So slowly, she wouldn't be surprised if time stopped entirely.

Dropping to her knees, panic, guilt and fear welling in her chest, Judy grabbed the sides of Mo's face.

"Mo?" She should call out, cry or something. But even touching his cold skin she knew it was too late.

Sweat broke out on her face as she grabbed for Mo's arms. His face was slack and she looked at his torso, waiting to see the blood pooling.

But there was none. None at all.

"Mo?" Judy asked again, looking for a wound. All she could see was a bullet lying a foot or so away.

Her panic moved swiftly from confusion to anger.

Leaning over her brother, she raised his eyelids for a moment and stared into his blue eyes. It was like looking into a mirror – perfectly identical to her own.

As hard as she could, Judy dug her longest nail into the soft skin at Mo's wrist. She repeated this over and over until there was an obvious cut. No blood.

The Hypers were intelligent. There were layers and layers of protective, self-generating flesh between this Hyper's outer layer and inner autonomous technology. A bullet would merely ricochet off.

This wasn't Mo. It had never been. The Hypers had replicated his emotions, expressions, and gestures perfectly, to get the emotions from her that they wanted.

Now, the Hypers were no longer the experiments. She was.

They would collect their fill of grief from this one interaction and somewhere, staring down a lens the Hyper engineers would study her reactions and learn how to perfect her emotions. This Hyper was likely a prototype, controlled by others. It would have probably pushed her until she fought with Mo and her emotions were heightened enough to collect and learn from.

With business-like movements, Judy Leatherbarrow got to her feet and picked up the bullet from where it had bounced off the Hyper's outer shell, tucking it into her pocket. There was nothing to do but to walk away.

Nothing to do but to consider that the Hypers had replicated emotions fully, truthfully, and as authentically as they ever could have.

But still, they were lacking. A replication was not an expression. They would still be vacuums for rehearsed emotions to flow through.

Judy made it back to her shelter and perched on the edge of the little camp bed, staring at the white, pristine walls. She held a thumb over the raised, spherical lump on her wrist. Now full of grief, panic, and anger.

Through the raised circle she could feel a pulse emanating, demanding attention – a reminder that she was living, feeling, unique - and for the briefest of moments, Judy felt utterly grateful that she was authentically, fallibly human.

### 3 Reflection

The short story “Outliers” describes a despondent view of humanity’s future in an AI backdrop, using holograms. With a mixture of holograms and human-looking AI Hypers, human interaction with singularity is explored. The outlook of this story is a realistic view on the needs and desperations of humanity. This science fiction prototype presents new possibilities for the angles of approaching AI development. This offers an insight into the future of humans and technology from all points of view, including the limitations regarding the spectrum of emotion and the replication of emotions. This knowledge can then be further used for development.

This story is written with the background knowledge of a writer and is influenced by the literary knowledge of a writer ever before a technical viewpoint. Dystopian literature poses the question that AI could possibly become a substitute for one-on-one human contact [3]. This literary approach can be seen the human protagonist’s motivations for survival and emotion collection, which is the story’s primary plot device with technology as secondary. Judy’s character is motivated by survival because she of her damaged family life. This origin of her isolation is the driving force behind the very emotions she strives to collect that, in turn, cause her physical survival by providing food and shelter. Thus, her emotional incentives are linked in a circle of plot with the Hypers. The story serves the purpose of showing the extremes of human need and the rapidity of technological advancement and how they intersect. By showcasing humanity against AI in stark contrast we can easily understand the differences of each as far as their impacts on a community environment and approach any arising complications.

From the perspective of a writer, Science Fiction Prototypes are a speculative method of imagining a possibility for a future. While this often means having the ability to understand the exciting opportunities available to humanity through technology, we can also understand limitations and the challenges they pose to not only technological advancement but also human satisfaction and quality of life. One such limitation is the lack of interaction present between the AIs and humans. The emotion collection technology employed by the Hypers shows the potential for valuable emotions which can be learned from. The suggestion of an emotional hierarchy which emotions are more complex to replicate through expression and response also allows reflection for the intensity of each emotion and how that may cloud a logical response pathway, which an AI may default to. Through the emotion collection method, the human protagonist displays an elasticity in her emotional range and rebound that contrasts the Hypers rigidity that is conveyed through a ruthless collection method.

The strength of emotion in the story is seen through the human protagonist’s restraint but undeniable longing for a family that has abandoned her. She is shrewd and ruthless in achieving a goal, which is her similarity to the Hypers. However, whilst the emotionless behavior of the Hypers is at the core of their development, the human

protagonist shows that her cool exterior is simply a mask to cover her turbulent emotional state. Throughout the story the primary form of technology is shown to be the emotion receptors on the human's wrists that irritates the wearer until it is full. The implication is that the technology within the receptors is sufficiently minute to pick up subtle changes in body observations. The story offers the opportunity for an open and frank discussion about the considerations for AI development in understanding if synthetic emotional ranges can be created and implemented, or if it is indeed that human emotion is instinctively unique due to changeability and individualism.

## References

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