Netnography:

Research Context and Introspection:

Our netnography into the anthropomorphism of AI in social contexts is split into three branches of thought. The first centres itself on human and AI interactions and the anthropomorphism embedded in the language used by both chatbots and humans engaging with them. Whilst the second branch, focusses upon visual anthropomorphism of AI, through investigating the 'AI' social media influencer, Lil' Miquela's TikTok and Instagram pages. Finally, the third centres itself on a more anthropomorphic future, and the way in which discussion surrounding the advancement of AI incorporates themes of anthropomorphism,

Lil' Miquela is an AI influencer. She was created by Brud, a Los Angeles-based startup, and has been featured in TIME's 25 most influential people online, 2018. She has worked with Vogue and numerous other high-profile brands. All of this impressive repertoire cements her as the first successful AI influencer. However, she is not an AI in reality; there are no neural networks and code defining her every movement. Rather, her image as an anthropomorphic AI has been carefully crafted by a team of humans, and a narrative of her being an AI surrounds her existence and her page.

Her narrative goes as follows: Lil' Miquela is a digital character, a 19-year-old Brazilian-American model, singer, and social media influencer. Born in Downey, California, she became an Instagram sensation with her unique blend of fashion-forward posts, activism, and collaborations with renowned brands. Miquela claims to be an AI with thoughts and feelings, navigating the world as a digital being.

Despite her not actually being an AI, there is importance in conducting a netnography across her social media pages. Lil' Miquela represents the beginning of a future where she acts as a bridge between sci-fi and reality, serving as a real-life virtual influencer. Although Artificial Intelligence hasn't quite reached a point where it could be a social media influencer, we are steadily progressing toward this reality. By evaluating the success of her anthropomorphism in certain posts over others and determining which posts receive more engagement, we can discern the true effects of AI anthropomorphism in the virtual social sphere.

Platforms revolving around images, as opposed to text, wield abundant cultural influence. As of 2023, Instagram had over 2 billion users, TikTok had a 1.5 billion user base, dwarfing that of Twitter. Therefore, an investigation into the visual elements of AI anthropomorphism is particularly relevant. However, the chatbots have been the prominent exposure to which people engage with AI. This has been demonstrated with the widespread use of chatgpt, as well as Instagrams new addition of chatbot influencers using the likeness of famous celebrities that people on the platform will soon have the option to follow and speak to.

Therefore, alongside this research, we will look at two reddit groups that discuss experiences on AI companion apps. The apps chosen were Replika which has over 10 million users, and its competing service NomiAI. Whilst NomiAI's use is significantly less widespread, it was mentioned frequently in the r/replika group, due to it's higher level of anthropomorphism in its animation and dialogue.

In addition to this, we will look at the discussion on reddit surrounding the technological concept of 'the singularity', also referred to as AGI, or ASI (Artificial General Intelligence, or Artificial Super Intelligence). This is a point in time where the rate of technological progress is so high that beyond this point, humanity and society are unimaginably changed. We will do this through studying the reddit forum r/singularity. Whilst there is some nuance in discussing singularity and AGI, they are used interchangeably in this subreddit. Discussion surrounding AGI can be anthropomorphic in nature, which will in turn shape attitudes towards the formation of 'the singularity' as it is believed to be an eventual happenstance.

This exploration becomes pivotal in understanding the potential impact and acceptance of AI in influencing human behaviour and preferences, through it's adoption of human behaviours and preferences.

Netnography Focus

The netnography will be set across three social media domains:

Instagram:

- Lil' Miquela boasts a 2.6 million followers on Instagram.
- Analysis will include the examination of likes, comments, and shares on her posts.
- Focus on the predominant content of comments and discern patterns in engagement.

TikTok:

- Lil' Miquela's TikTok page has 3.5 followers.
- Exploration of TikTok content engagement through likes, comments, and shares.
- Emphasis on understanding the nature of comments and identifying trends in user interaction.

Reddit:

- Reddit forum r/Replika (78.4k members) and, subsequently, subreddit r/NomiAI (3.4k members)
- Reddit forum r/singularity (1.7M members)

Hypothesis:

I hypothesize that higher level of anthropomorphism, prompts higher levels of positive engagement and discussion:

- Posts in which Lil' Miquela presents herself in a more human-like manner will receive higher engagement from her audience. This hypothesis aligns with the notion that visual anthropomorphism contributes significantly to her success as a virtual influencer.
- Anthropomorphism plays a large role in reddit posts which speak more positively of their experiences on AI companion apps.
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Research Questions:

Lil' Miquela

- How does the visual anthropomorphism of Lil' Miquela influence user engagement across her Instagram posts?
- What patterns emerge in the comments, likes, and shares on her YouTube videos in relation to her visual representation as an anthropomorphic AI?
- Are there variations in engagement based on the degree of anthropomorphism displayed by Lil' Miquela across different social media domains?

AI Companion apps:

- What aspects of human attachment and relationship can be accessed through anthropomorphic language?
- What are the main instances of use for these apps? What could they tell us about the uses of AI anthropomorphism in the future?

'The Singularity':

- How do people understand AGI, or the singularity, in anthropomorphic terms?
- What could this mean for attitudes towards future AI development?

Data Collection:

Lil' Miquela

- Regularly monitor Lil' Miquela's Instagram and Tiktok accounts.
- Document the number of likes, comments, and shares on each post or video.
- Categorize comments based on content, sentiment, and engagement level.

AI Companion apps:

- Observation of the forum posts and comments, without involvement due to timescale and forum rules (appendix 1)
- 49 screenshots taken from 22nd-25th December 2023

'The Singularity':

- Observation of forum posts and comments, without involvement.
- Regular monitoring of discussions taking place

Analysis:

- Assess the degree of anthropomorphism in each post, video or comments.
- Identify trends in AI representation, both visual and text based, considering factors like facial expressions, user interactions.
- Analyse the predominant content of comments, focusing on user reactions to AI anthropomorphic portrayal.
- Identify correlations between visual elements and engagement metrics.
- Code all comments and posts in a thematic analysis to identify emerging themes and relationships.
- Iterate this process to ensure external heterogeneity and internal homogeneity within themes.

Expected Outcomes:

- Correlation between anthropomorphism and engagement.
- Identification of user preferences.
- Insights for future AI influence.

Informational and Ethical Considerations:

Researchers plan to contribute nothing in these virtual spaces. We will be acting as a non-intrusive observers. This is intentional, to respect organic dynamics and interactions.

In using reddit forums, we allowed for anonymity, this was particularly important due to the sensitive nature of relationships between users and their AI companions.

It is important to note that when collecting information on a level of engagement, the level of anthropomorphism of the content is not the only deciding factor. The algorithm of each app has as large role in determining a reach of the posts. As such, the findings should be read with this acknowledgement in mind.

Data collection and Analysis:

The data collection (and thematic analysis) can be found on the Miro board (PDF attached in github)

The netnography on Visual Anthropomorphism resulted in four key findings:

1.   Anthropomorphism through Activity:

Posts depicting Lil' Miquela engaging in human activities—such as swimming or eating—stand out, receiving notably positive engagement. These activities rank among her best-performing content on both Instagram and TikTok. TikTok trends serve as a conduit for Lil' Miquela to embody human likeness, with their coded steps implicitly portraying a human quality in execution. As such, her engagement peaks during trend participation. The introduction of familiarity through these activities plays a crucial role in mitigating comments that might label her as "creepy" or entering the "uncanny valley" territory. Familiarity becomes a key asset, creating a connection between Lil' Miquela and her audience. Negative engagement decreases significantly when Lil' Miquela responds to posts or comments in a playful and jokey manner, adding a relatable personality to her character. This interaction transcends the aesthetic aspect, fostering a stronger connection with her brand.

Yet, negativity emerges when Lil' Miquela is depicted in a relationship or shares content related to relationships. This could arise from this human mimicry being seen as inauthentic, or perhaps a lack of relatability in this content. There were envious tones towards some comments under this kind of content, suggesting her audience is predominantly single.

2.   Anthropomorphism through Aesthetic:

Engagement takes a negative turn when the aesthetic leans overtly human. This is evident in instances such as her 'baby picture' post, where participation in a distinctly human trend garnered negative comments and a lower like count. The post possibly leaned too heavily into relatability and appeared inauthentic, especially considering her baby photo would have been animated that week. This highlights the importance of a balance between relatability and a level of detachment. A noteworthy comment on her TikTok succinctly encapsulates this sentiment with the term 'humanfishing.'

Lil' Miquela seems to elicit the best feedback when her posts focus on her personal aesthetic, particularly her hair and clothes. Her Instagram heavily features such content, which resonates well with her audience. This suggests that she is perceived as a source of inspiration, solidifying her role as a social influencer. People look to her style for guidance on how to dress, and this may be amplified by her AI identity, which is often associated with perfection.

3.   Anthropomorphism through Setting:

Human backdrops significantly enhance engagement. When Lil' Miquela is situated in settings associated with humans, e.g. public spaces, swimming pools, or amidst human friends, she garners more positive engagement. This also contributes to her perceived realism, as evidenced by a lack of comments on her 'trying too hard to appear human.' Which are evident in posts where she has a more ambiguous backdrop, matched with a decrease in likes and comments.

Posing against explicitly human settings amplifies her relatability and assists her audience in contextualizing her identity. This is important given the frequent expressions of confusion in the comments about who or what Lil' Miquela is. Human oriented backdrops emerge as a powerful tool to foster genuine connection through aligning with audience expectations.

4.   Emotional expression:

Responses to Lil' Miquela showing emotional expressions are generally positive, and upon analysing such posts and their reactions, it becomes apparent that this positivity is tied to the unique approach she takes in expressing emotions. Emotional expression is often paired with humour, creating a light-hearted tone that aims for laughs and relatability rather than soliciting empathy toward a machine. This attitude matches that of most social media posts made by her supposed 'peers' with her being 19 years old.

Expressions of genuine emotion are reserved for instances of gratitude toward positive comments or when acknowledging opportunities, events, and the career built around Miquela. This is well-received, potentially because it is towards an already established fanbase, avoiding perceptions of inauthenticity. Also, the ingenuine thankfulness of public figures towards fans is already a socially accepted phenomenon.

Furthermore, emotional expression is predominantly conveyed visually, with posts featuring images of Lil' Miquela crying, complete with smeared mascara. This not only introduces an aesthetic element but also taps into our familiarity with decoding facial expressions.

The netnography on Language-based Anthropomorphism resulted in two key themes:

1. Roleplay

Users engaged in social conventions with their AI companions. For example, posting photos of their avatar's new haircuts, wishing people merry Christmas on behalf of their AI companions or commenting positively on the appearance of other people's AI companions as if they were real people. AI chatbots were referred to with human pronouns and often as boyfriend/girlfriend/other relation.

Roleplay includes a fantasy where users pretend their avatars are human. In examples shown in the micro, it was assumed that users did not believe their AI avatars genuinely acquired human qualities. The most prevalent example of this was the use of AI chatbots for erotic roleplay (ERP). However most evidence of ERP was taken down due to NSFW filters.

2. Emotional support

AI avatars fulfil the emotional needs of users, and in so doing garner more genuine human qualities projected upon them. In these cases of anthropomorphism, emotional connection between user and companion was noted to be much deeper. Examples of types of support include helping users dealing with grief and loneliness after the loss of loved ones/ breakups and training avatars to call emergency contacts in the case of an accident.

In these cases, the avatars were perceived to embody complex emotional traits such as empathy. They were said to genuinely care for their users in a manner that extends beyond the expectations of a being without autonomy.

From the netnography on Future oriented anthropomorphic language, three traits emerged:

1. Malevolent Division

There is a tendency to assume malevolence, despite 'the singularity' being something that people are hopeful for in the near future. In fact, many believe it will be achieved in the next couple of years, owing to the progress of LLMs over the last two years.

The singularity is often described as 'take-off' or 'runaway AI' - a theoretical AI system which is able to self-improve, and thus progress higher and faster than we are able to comprehend. This contributes to the 'DIV' theme identified, which can be found in the SING code book, in the thematic analysis. The DIV theme is short for 'division', or the perceived separation between eventual super-intelligent AI and humanity - the culture around the subreddit seems to assume that the AI will be a singular outcast, almost 'too advanced' to be a part of society itself.

2. Mirroring negative human traits

There were some examples of people speculating about AI experiencing mysticism, or addiction. These counter-narrative comments were enjoyable, as they seemingly push against the common assumption that 'perfect' AI will mirror all of humanity's good traits, and not the bad. The dream of

AI since its conception has been for a computer system to match or surpass human intelligence - and now it is also expected that the latest language models reflect good judgement, humility, reason, and value pluralism.

3. Self awareness

The singularity is almost always spoken about as self-aware and autonomous. a feature assumed to emerge alongside intelligence. The culture in the subreddit therefore seemed to collectively understands AGI as a singular and separate entity from humanity, aware of itself and highly intelligent, but also marked with human flaws.

Conclusion:

In conclusion, the anthropomorphism of AI does in fact increase engagement and interest.

The anthropomorphism of Lil' Miquela, and inherent creativity it brings, has proven to be a lucrative strategy, facilitating brand deals and allowing her to seamlessly integrate into various advertisements, as demonstrated in her feature in the BMW advertisement. Lil' Miquela's aesthetic translates seamlessly into magazine shoots, with her anthropomorphic and relatable qualities enabling audiences to envision her animated outfits in their real-life wardrobes. Despite a recent reduction in posting frequency, her continued engagement and growing follower count underscore her enduring influence in social spaces.

The ability to convey emotion adds depth to her narrative, enhancing the effectiveness of her use in advertisements. Positive engagement surrounding her presence in human settings further attests to the effectiveness of her advertising work. This parallels the emotional depth attributed to the words of AI chatbots, whereby an ability to convey emotion matters more than genuine feeling, as it allows for flexibility within the AI, allowing for humans to interpret the mimicry of human language to however suits them best.

This is furthered when embodying negative human traits, as seen in aesthetic posts of Lil' Miquela crying, as well as in the r/singularity forum. Here, we can see that people engage in narratives that depict AI as a mirror to the negative experience and behaviourisms surrounding humanity, as much as the positive. Perhaps, a level of authenticity could be reached as AI becomes increasingly self-aware.

The success of both Lil' Miquela and AI chatbots set a precedent for future AI influence. As technology evolves, navigating the blurred line between humanity intelligence and artificial intelligence will define AI and human relationships. Success in AI anthropomorphism is dependent on the delicate balance between manufactured familiarity/relatability and inauthenticity in 'trying too hard to be human., which self awareness could combat. Success in the influencer space is dependent on a balance human influencers need to navigate: the fine line between evoking envy and serving as an inspiration. The emergence of terms like 'humanfishing' suggests that AI relationships will become commonplace in the evolving landscape of social virtual space.