All Too Well Versus *Uptown Funk*: An Indirect Theory of Mind Replication Using Writerly and Readerly Song Lyrics in a Plurilingual Setting

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Abstract

The theory of mind, at its core, concerns the emotional intelligence, our empathy, and the ability to read and interpret the mental states of others we interact with. In the early 2010s, Kidd and Castano (2013) carried out a seminal research to investigate the theory of mind effects of reading literary fiction versus reading popular genre fiction, nonfiction, and no reading. The researchers found that the former enhanced the performance in the theory of mind test, namely the Reading the Mind in the Eyes Test (RMET), more than the latter three did. Consequently, the original researchers encouraged the replications of their research, either directly or indirectly using other media. The present paper reports on one such replication, using song lyrics as the indirect medium. Conducted with 29 undergraduate medical students at plurilingual UCSI University Terengganu Campus, the results show that the writerly *All Too Well* group performed the best in the RMET, whereas there was no significant difference in the RMET performance between the readerly *Uptown Funk* group and the control group. For this study, therefore, the theory of mind effects were positive only for the writerly texts, but not for the readerly. Accordingly, this paper calls for more future replications, especially indirectly using media other than book excerpts, on the theory of mind effects.

Keywords: *theory of mind, empathy, emotions, song lyrics*

1.0   Introduction

The theory of mind refers to empathy and our ability to interpret the mental states of the people we have interactions with (Black & Barnes, 2015). In the early 2010s, Kidd and Castano (2013) carried out a seminal research, in which the researchers looked into the relationship between reading different types of fiction and their effects on the theory of mind. Consequently, the researchers found that reading literary fiction enhanced the performance in the theory of mind test more than reading popular genre fiction, nonfiction, or no reading did. Since then, their research has inspired a growing number of replications, essentially insinuating that the theory of mind is indeed an area of collective interest among many scholars.

2.0   Literature Review

2.1   The theory of mind

According to Black and Barnes (2015), the theory of mind revolves around "the awareness of and the ability to interpret the mental states and emotions of others." As humans, not only do we acknowledge that we have our own mental states, but we recognize as well that we may not share similar mental states with others around us (van Kuijk et al., 2018). Furthermore, according to Kidd and Castano (2016), it is exactly this ability to grasp others' mental states that immensely contributes to the development of our empathy, proso-

cial behavior, and comprehension of social cues. Kidd and Castano (2016) also argue that the theory of mind can be achieved through social interactions and by consuming fiction — but what type of fiction?

2.2 The original research

In the original research, Kidd and Castano (2013) set out to answer the aforementioned question by instructing four groups of participants to read several book excerpts taken from either literary fiction, popular genre fiction, nonfiction, or none at all respectively. After that, the participants were asked to complete the Reading the Mind in the Eyes Test (RMET; Baron-Cohen et al., 2001), a test especially designed to gauge the theory of mind. In particular, the participants had to choose the adjective that best described the emotion in the set of eyes in each picture. There were 36 pictures overall, each with four adjective choices. In their final analysis, the researchers found that the literary group performed better than the other groups in the RMET. Consequently, the researchers encouraged the replications of their study using other media as well, such as films and plays.

2.3 The subsequent replications

Although there have been multiple replications of Kidd and Castano's (2013) research in recent years, not all of them reported the replication of results. In particular, while Kidd et al. (2016), van Kuijk et al. (2018), and Kidd and Castano (2018) found the similar results replicated in their respective replications of the original research, Panero et al. (2016) and Samur et al. (2017) found, contradictingly, that there was no significant discrepancy in the RMET performance between the literary fiction group and the popular genre fiction group. The latter two groups of researchers further attributed this to the fact that brief exposure to little snippets of literary fiction could not warrant better theory of mind outcomes. This also prompted van Kuijk et al. (2018) to point out the need for more replications that would warrant a potentially more robust and substantive empirical evidence pertaining to the relationship between reading fiction and the theory of mind.

Meanwhile, Black and Barnes (2015) and Castano (2021) chronicled their respective indirect replications using the visual narrative, which echoed the results found in the original research. On the one hand, Black and Barnes (2015) found that watching television (TV) dramas enhanced the RMET performance more than watching TV documentaries did. The researchers further inferred that while documentaries were information-packed, dramas had narrative complexity much like literary fiction. On the other hand, the group exposed to art films in Castano's (2021) study outperformed the group exposed to popular Hollywood movies in the theory of mind test.

2.4   Writerly texts versus readerly texts

The predominant trend in Kidd and Castano's (2013) research and its subsequent replications is that reading literary fiction enhanced the theory of mind more than reading popular genre fiction or nonfiction did. One reason for this is that literary fiction revolves more around character development, whereas popular genre fiction centers more on the development of the plot (Kidd et al., 2016; van Kuijk et al., 2018). Thus, literary fiction readers tend to not only consider the many perspectives presented to them through the story (Black & Barnes, 2015; Miesen, 2004), but also to put themselves in the characters' shoes, hence becoming emotionally invested (Djikic et al., 2013).

Furthermore, according to Kidd and Castano (2013), literary fiction offers a vast array of challenging texts and characters that are as complex as real-life individuals. Following this logic, as fictional characters mirror real-life human beings, understanding the former, therefore, is the same as understanding the latter (Mar, 2018; Mar et al., 2006). In addition, the interactions between characters in fiction also imitate the ones in reality (Mar & Oatley, 2008). Hence, fiction is a simulation of the real world (Mar, 2018; Mar & Oatley, 2008; Mar et al., 2006; Oatley, 1995). In contrast, Kidd and Castano (2018) argue that characters in popular genre fiction are more formulaic than those in literary fiction. Thus, the predictability quality of the characters in popular genre fiction makes them less relatable than their equivalents in literary fiction owing to the fact that real life is so unpredictable.

Moreover, Kidd and Castano (2013) postulate that literary fiction fosters the intricate three-way communication between the readers, the writer, and the characters, and therefore demands an active participation from the readers; readers are themselves involved in the construction and growth of the story. This explains why literary fiction is the inexhaustible mine of writerly texts (Black & Barnes, 2015; Kidd & Castano, 2013). Accordingly, Kidd and Castano (2013) infer that because they demand readers to gauge the mind of the characters, writerly texts promote the development of the theory of mind.

Meanwhile, according to the participants in Kidd and Castano's (2013) original research, literary fiction was less enjoyable than popular genre fiction, even though they recognized the former as quality literature. In other words, readers gain entertainment from popular genre fiction (Kidd & Castano, 2013; Miesen, 2004) and this is the distinctive feature that sets readerly texts apart from writerly texts. Additionally, another key feature that constitutes readerly texts is that reading them involves a passive process (Kidd & Castano, 2013) because they require no level of engagement from the readers. In short, readerly texts have no other merits than to entertain.

2.5   Native speakers as the focal point in prior theory of mind studies

To date, neither the original research nor its subsequent replications has explicitly involved groups other than native speakers of English. To illustrate, all participants in Black and Barnes' (2015) study were fluent in English. Meanwhile, in the replication by Kidd et al. (2016), the researchers deliberately filtered out respondents who were not first speakers of English. Therefore, this necessitates an immediate execution of a replication of Kidd and Castano's (2013) research with speakers other than native, namely speakers of English in a plurilingual setting, in order to observe how they would fare in a theory of mind study and compare to the native speakers in previous replications.

2.6   Definining "plurilingual setting"

According to Sottani and Cossu (2016), a plurilingual setting, or country, is a nation "with a colonial history or a high rate of immigration." In the case of Malaysia, the country was both colonized by the British and received a massive number of immigrant workforce from China and India in the past, which resulted in the quintessentially plurilingual Malaysia that the world today knows very well. Consequently, there are Malaysians who speak Malay, Chinese, Tamil, and/or English as their first language, and it is not at all uncommon to encounter Malaysians who are able to speak fluently in more than one language, the reason being that while Malay is the national language, English is the nation's official language. As such, it is quite the natural phenomenon to hear code-switching, or Malaysians "going from one language to the other in mid-speech when both speakers know the same two languages" (Cook, 2008, p. 5). Khubchandani (1997), Liebscher and Dailey-O'Cain (2005), Wei and Martin (2009), and Willans (2010) further corroborate that one key characteristic of such a plurilingual setting as Malaysia is code-switching.

The present study, however, did not conform to Kachru's (1982, 1985) three concentric circle model of World Englishes in identifying Malaysians as English as a second language (ESL) speakers. While it is true that English is a second language to most Malaysians, it is true as well that there are still those who speak English as their first language, although their English would be markedly distinct from native speakers in Kachru's (1982, 1985) inner-circle countries like the United States, Canada, the United Kingdom, Ireland, Australia, and New Zealand, all of which have predominantly English environment, as opposed to outer-circle, plurilingual Malaysia. Therefore, it is appropriate to refer to Malaysians collectively as speakers of English in a plurilingual setting.

3.   Methodology

3.1   Research questions

Ashari (2022) makes the arguments for replicating the theory of mind studies using songs with nonnative speakers, thereby favorably shifting the existing literature from psychology- to psycholinguistics-centric. Correspondingly, the present study attempted to replicate the original research indirectly using song lyrics with speakers of English in a plurilingual setting. This study, therefore, set out to answer the following research questions (RQs):

RQ1.   What are the effects of reading the lyrics of a writerly song on the ability to read others' mental states, as compared to reading the lyrics of a readerly song?

RQ2.   How would the theory of mind effects using song lyrics in this study compare to the theory of mind effects in Kidd and Castano's (2013) research that used book excerpts?

RQ3.   What are the differences, if any, between the theory of mind effects in this study with English speakers in a plurilingual setting, and the effects in prior theory of mind studies conducted with native speakers?

3.2   Research participants

Initially, 30 participants were recruited for this study, but one research instrument was returned unanswered, making the final count 29, 15 of which were females. Their ages ranged between 22 and 27 years old (mean, $M = 23.62$). All of the participants were undergraduate students of the Doctor of Medicine (M.D.) program at UCSI University Terengganu Campus, a private university in Malaysia. 18 (62.07%) participants self-reported Chinese as their first language, 5 (17.24%) participants Malay, 3 (10.34%) participants English, 2 (6.90%) participants Tamil, and 1 (3.45%) participant Bidayuh. 7 of the first speakers of Chinese reported to have known English their whole lives as well. Most importantly, it is crucial to highlight that these medical students work vigorously in a plurilingual setting on a daily basis. While their first languages may be different, their medium of instruction in lectures is English, and during their clinical rotations at Hospital Sultanah Nur Zahirah (HSNZ), a teaching hospital in Kuala Terengganu, they need to understand their patients, most of whom speak not the standard High Malay but the regional Terengganu dialect, which is predominantly spoken in Terengganu, a state in the East Coast of Peninsular Malaysia.

Accordingly, the participants were divided into three groups, namely one group exposed to the writerly song lyrics (50.00% male), another to the readerly song lyrics (44.44% male), and a no-exposure control group (50.00% male).

3.3　　Research instrument

Briefly, the current study was an experimental replication study. This study employed a primarily quantitative method by administering a short survey with 20 multiple-choice questions and several open-ended questions. This study also focused on the lyrics taken from just two songs, namely *All Too Well*, which represented the writerly text, and *Uptown Funk*, which represented the readerly text. The survey handout consisted of three sections, namely Section A, Section B, and Section C, taking between 15 and 20 minutes to complete.

Section A comprised the lyrics of either the writerly song or the readerly (or none for the control group). Representing the writerly text, *All Too Well* by Taylor Swift is an emotional song and has meaning, albeit a hidden one. The hidden meaning behind the song is "maple lattes" (Swift & Rose, 2012), which is spelled by the capitalized letters in the lyrics on Swift's old version of *Red* album notes. According to the American music journalist Rob Sheffield (2017), not only is *All Too Well* "a tragic tale of doomed love and scarves and autumn leaves and maple lattes," it is also "a legendary heartache." Unsurprisingly, with its captivating storytelling element, the song tops Sheffield's (2017) list of all 129 Taylor Swift songs ranked on the *Rolling Stone*. Additionally, on *Billboard* the song is one of the seven best piano ballads from Taylor Swift (Brown, 2016).

Conversely, the readerly text featured the lyrics taken from Mark Ronson and Bruno Mars' (2014) *Uptown Funk*, precisely so due to the "blatant self-promotion and name-dropping" (Hayward, 2016), such as "Michelle Pfeiffer," "Chucks," "Saint Laurent," "Skippy," and "I'm so pretty" (Ronson & Mars, 2014). The song thus lacks depth, despite having been popular ever since its release.

Meanwhile, Section B contained 20 multiple-choice questions adapted from Baron-Cohen et al. (2001). Each question showed an image of a set of eyes with four adjective choices; the participants were instructed to select the adjective that best described the emotion in the eyes. According to Baron-Cohen et al. (2001), those diagnosed with Asperger's or high-functioning autism are inclined to show poor judgment about the mental states of people they interact with and therefore have the likelihood to be outperformed by their nonautistic counterparts in this particular task. In the original RMET designed by Baron-Cohen et al. (2001), there were 36 questions in total, but this study adapted only 20 of them to facilitate the shorter case-study survey.

Lastly, questions concerning the participants' demographic information and several open-ended questions regarding the participants' opinions on the previous two sections constituted Section C. For demographics, participants were instructed to state their gender, age, first language, the number of years they have known English, and their undergraduate program. As for the open-ended questions, the participants were asked, in the likelihood that they knew it, to state the song title in Section A and/or the name of the artist. Otherwise, they were asked whether they thought the lyrics belonged to a popular song, and the reason

for it. The participants were further prompted to guess the gender/name of the artist and explain why they guessed so. Finally, the participants were asked if they had any difficulties with the adjectives in Section B and to state those that they were not familiar with.

3.4   Research procedure

3.4.1 Data collection

The survey handouts were distributed to the participants. The cover informed the participants generally about the study title, the aim of the survey, and the three sections of the handout. In Section A, participants in both experimental groups were instructed to read their respective lyrics carefully and to circle any words and phrases that they were not familiar with. Meanwhile, the participants in the control group were told to proceed to Section B instead. All participants were advised not to use any communication gadgets. Following this, all three groups were then instructed to answer all 20 questions in Section B and the open-ended questions in Section C.

3.4.2 Data analysis

Once the handouts were completed and returned, the data were then analyzed and interpreted. For Section A, the unfamiliar words and phrases were listed from the ones circled by the *All Too Well* and the *Uptown Funk* participants.

For Section B, the average and the standard deviation (*SD*) of the RMET scores were calculated for each group in order to detect the relationship between the exposure to different types of song lyrics and the effects on the participants' ability to read others' mental states. Here, the results were further compared to the findings in Kidd and Castano's (2013) original research and its subsequent replications, effectively answering all three research questions.

Ancillary to that, the responses to the open-ended questions in Section C were observed as well for further discussion.

4.   Results and discussion

4.1   Section A: Unfamiliar words and phrases

4.1.1 Results

Section A gauged the words and phrases in the lyrics unfamiliar to the participants and these findings are duly tabulated in the following Table 4.1. For the *Uptown Funk* participants, the males listed "hallelujah" (frequency, $f = 1$) and "Got Chucks on with Saint Laurent" ($f = 2$), whereas a female circled the phrase "Make a

dragon wanna retire man." The word "flaunt" was unfamiliar to both *Uptown Funk* males ($f = 3$) and females ($f = 2$). Meanwhile, "Upstate," "tee ball," and "plaid shirt" were all circled by both *All Too Well* males ($f = 1, 2,$ and 4 respectively) and females ($f = 3, 1,$ and 1 respectively), with 2 male participants also adding "sweet disposition."

Table 4.1: *Frequency of Participants' Unfamiliar Words and Phrases*

Group	Male	f	Female	f
Uptown Funk	"hallelujah"	1	"flaunt"	2
	"flaunt"	3	"Make a dragon wanna retire man"	1
	"Got Chucks on with Saint Laurent"	2		
All Too Well	"Upstate"	1	"Upstate"	3
	"sweet disposition"	2	"plaid"	1
	"tee ball"	2	"tee ball"	1
	"plaid shirt"	4		

4.1.2 Results

The participants' unfamiliarity with the words and phrases listed in Table 4.1 can be attributed to two reasons. The first one is the excessive references to pop culture and this reason is valid for *Uptown Funk*. To illustrate, there are two pop culture references alone in just the phrase "Got Chucks on with Saint Laurent," in which "Chucks" refers to the popular footwear by Converse and "Saint Laurent" the popular luxury fashion brand Yves Saint Laurent, or YSL. Incidentally, "Got Chucks on" also rhymes with "with Saint Laurent." The second reason, valid in the case of *All Too Well*, is the abundance of American culture-specific items in the lyrics, which makes sense given that the songstress is American and the song is practically about her reliving her past experience. Here, the examples include "Upstate" and "tee ball," the former of which refers to the region Upstate New York and the latter a sport played by little American children.

4.2   Section B: RMET performance

4.2.1 Results

Figure 4.1 shows the RMET performance of the control group and the two experimental groups. First off, the control group recorded the RMET score of $M = 12.80$ ($SD = 2.14$). Meanwhile, the readerly *Uptown Funk* participants achieved $M = 12.78$ ($SD = 1.40$), whereas the writerly *All Too Well* group boasted the highest RMET score of $M = 14.50$ ($SD = 2.11$). The key takeaway from these readings is that while the *All Too Well* group performed the best in the RMET, there was no significant difference in the RMET performance between the control group and the *Uptown Funk* group. Therefore, the theory of mind effects in this

particular indirect replication study using song lyrics were positive only for the writerly *All Too Well* group, but not for the readerly *Uptown Funk* group, relative to the RMET reading of the no-exposure control group. Reading the lyrics of the writerly song *All Too Well* facilitated the ability to recognize others' mental states.
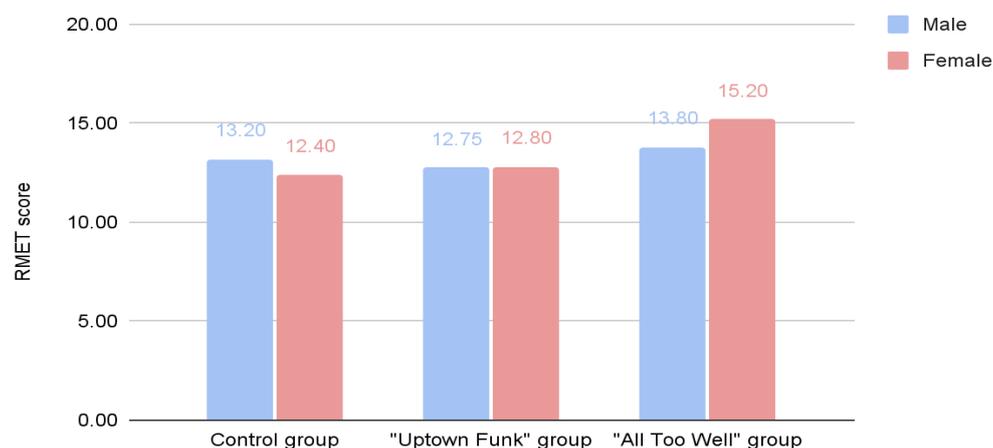
Figure 4.1
RMET Performance
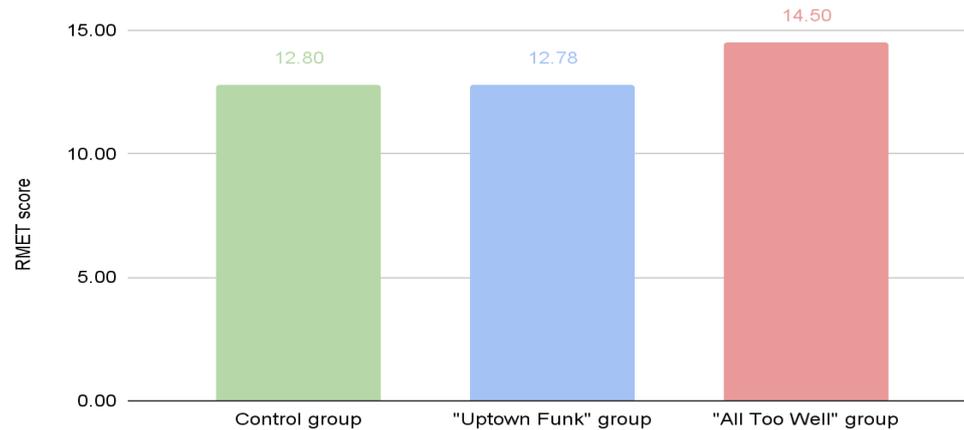
Meanwhile, Figure 4.2 further illustrates the RMET scores of the participants in the three groups by their gender. For the control group, the males achieved a better RMET score at $M = 13.20$ ($SD = 2.64$), in comparison to their female counterparts at $M = 12.40$ ($SD = 1.36$). In the case of the readerly *Uptown Funk* group, there was no significant difference in the recorded RMET readings of the male ($M = 12.75$, $SD = 1.30$) and the female ($M = 12.80$, $SD = 1.47$) participants. At the highest $M = 15.20$ ($SD = 0.75$), the writerly *All Too Well* female participants outperformed their male equivalents ($M = 13.80$, $SD = 2.71$) in the theory of mind test.

Figure 4.2
RMET Performance by Gender

4.2.2 Discussion: Answering the research questions

Based on Figure 4.2, there was an inconsistent growth pattern across the mean RMET scores recorded by the male population. The readings became lower from the control group to the *Uptown Funk* group, yet got higher again from the readerly group to the writerly *All Too Well* group. Meanwhile, there was a positive growth pattern across the mean scores in the female population, although the increment was not uniform. The RMET scores gained momentum just slightly from the control group to the experimental readerly group, but then became substantially better from that to the experimental writerly group. Cumulatively, as indicated in Figure 4.1, while the *All Too Well* participants obtained the best overall performance in the theory of mind test, there was no significant difference in the RMET performance between the control group and the *Uptown Funk* group. Hence, this encapsulates the answer to RQ1, namely that relative to the control group, the theory of mind effects were positive only for the writerly group, but not for the readerly group; reading the song lyrics of the writerly *All Too Well* augmented the ability to read others' mental states, whereas reading the song lyrics of the readerly *Uptown Funk* did not.

Furthermore, to answer RQ2, the findings of the present study demonstrate that the theory of mind effects using song lyrics became more positive only insofar as the writerly text was concerned. In contrast, the readerly text, much like no reading, did not boost the theory of mind. Comparing these findings to those in the original research by Kidd and Castano (2013) that used book excerpts, the researchers found that the group exposed to literary fiction (i.e., the writerly group) outperformed the group exposed to popular genre fiction (i.e., the readerly group), proving that literary fiction enhanced the theory of mind more than popular genre fiction did.

Finally, to shed some light on the third and final research question, Table 4.2 summarizes the findings of prior theory of mind studies, as well as the present study. To start off, the studies conducted by Kidd et al. (2016), van Kuijk et al. (2018), and Kidd and Castano (2018), all direct replications of Kidd and Castano's (2013) research, also found the replication of results, entailing that literary fiction supported the development of the theory of mind; all three replications involved native speakers of English. However, the direct replications carried out by Panero et al. (2016) and Samur et al. (2017) found no significant difference in the RMET performance between the experimental groups; both replications also revolved around English speakers geopolitically limited to the United States.

Table 4.2: *Summary of Prior Theory of Mind Studies and the Present Study*

Study by	Type/Medium	Participants	Findings
Kidd and Casta-no (2013)	Original study using book excerpts from literary fiction, nonfiction,	697 native speakers recruited online	Literary group outperformed other groups in RMET

		popular fiction, or none	
Kidd et al. (2016)	Direct replication	403 native speakers recruited online	Replication of results
Panero et al. (2016)	Direct replication	792 American participants	No significant difference
Samur et al. (2017)	Direct replication	1006 American participants recruited online	No significant difference
van Kuijk et al. (2018)	Direct replication (plus meta-analysis)	558 native speakers recruited online	Replication of results
Kidd and Castano (2018)	Direct replication (3 extensions of the original study)	969 native speakers	Replication of results in one extension
Black and Barnes (2015)	Indirect replication using TV dramas or TV documentaries	277 undergraduate students fluent in English	Drama group outperformed documentary group in RMET
Castano (2021)	Indirect replication using art films or Hollywood movies	232 American participants recruited online	Art film group outperformed Hollywood movie group in RMET
The present study	Indirect replication using writerly song lyrics versus readerly song lyrics	29 speakers of English in a plurilingual setting	Writerly group showed the best RMET performance but no significant difference in performance between readerly group and the control group

With regards to the indirect replications, the study done by Black and Barnes (2015) with fluent speakers of English uncovered that the experimental group exposed to TV dramas (i.e., the writerly texts) outperformed the one exposed to TV documentaries (i.e., the readerly texts) in the theory of mind test. In another indirect replication by Castano (2021), the American participants recorded better RMET outcomes when exposed to art films (i.e., the writerly texts), in comparison to the exposure to popular Hollywood

movies (i.e., the readerly texts). Contrastingly, the present indirect study carried out with English speakers in a plurilingual setting, namely the undergraduate medical students at UCSI University Terengganu Campus, found that the theory of mind effects were positive only for the writerly participants exposed to the lyrics of Taylor Swift's *All Too Well*, and that there was no significant difference in the RMET performance between the control group and the readerly group exposed to the lyrics of Mark Ronson and Bruno Mars' *Uptown Funk*.

Essentially, the present findings feed further into the narrative that there needs to be more replications of Kidd and Castano's (2013) research, directly or indirectly, in order to keep building on and strengthening the body of research on this topic that would one day amount cohesively to our capital understanding of the theory of mind.

4.3   Section C: Responses to open-ended questions

4.3.1 Results

Moving on to Section C, which carried the open-ended questions, Table 4.3 shows the participants' responses when asked about their respective song lyrics. For the *Uptown Funk* group, 2 out of 4 male participants wrote that they did not know what song the lyrics were taken from; only 1 out of 5 *Uptown Funk* females replied the same. Following this, all three participants guessed that the readerly lyrics belonged to a popular song. Meanwhile, for the *All Too Well* group, all 5 male and 5 female participants wrote unanimously that they did not know what song the lyrics were taken from. Following this, only 2 males and none of the females guessed that the writerly lyrics belonged to a popular song; a female participant did not state her opinion on this.

Table 4.3: *Participants' Responses Regarding Their Respective Song Lyrics*

Group	Did not know the song to the lyrics in Section A		Would say the lyrics belonged to a popular song	
	Male	Female	Male	Female
Uptown Funk	2 out of 4	1 out of 5	2 out of 2	1 out of 1
All Too Well	5 out of 5	5 out of 5	2 out of 5	0 out of 4

Moreover, further anecdotal analysis includes that, in the case of the readerly *Uptown Funk* group, a male participant would still consider that the lyrics belonged to a popular song, despite initially claiming to not know what song the lyrics were taken from, because he "heard it on radio once." The participant also correctly guessed the gender of the artist, noting that the "lyric mostly talk [*sic*] about women."

As for the writerly *All Too Well* group, a couple of male participants respectively wrote that the lyrics belonged to a popular song because of the "meaningful lyris [*sic*]" and because it "sounds like a good rap song." Meanwhile, another couple of male and female participants wrote, rightfully, that the lyrics did not belong to a popular song because they had "never heard" the song before. After all, it follows a logical sense that a song is only popular when it reaches lots and loads of listeners. It is rather impossible to find a popular song that has not been heard by a single person in any given group. If that is to be the case, then the popular song does not deserve to be called so. Furthermore, whereas a male participant guessed the *All Too Well* artist's gender incorrectly, noting that the song "seems to sing about a girl," a female participant correctly guessed otherwise, writing that "the words resemble to how she is going through a heartbreak." Additionally, all 29 participants in this study reported unanimously that there were no adjectives that they were not familiar with in Section B.

4.3.2 Discussion

On the one hand, even though the majority 6 out of 9 participants in the *Uptown Funk* group knew what song the lyrics were taken from, their RMET performance did not significantly differ from that of the control group; the readerly song lyrics did not enhance the theory of mind. However, this is not to fault popular readerly texts such as *Uptown Funk* for being the Mecca for pop culture escapists wishing for just a pinch of time away from reality and the emotional burden of mundane everyday life because pop culture escapism is important. According to Yahr (2017), entertainment in the form of pop culture is essential as it gives our mind a much-needed break from troubling real-world matters like politics, climate change, and whatnot.

Quite the contrary, none of the writerly *All Too Well* participants, unsurprisingly, knew what song the lyrics they were exposed to belonged to. Despite having been performed live at the 56th Grammy in 2014, the song *All Too Well* has been a relatively niche Taylor Swift song, especially when compared to her huge hits such as *Love Story*, *Fifteen*, *You Belong with Me*, and *Back to December* — until she released the re-recording of her *Red* album in 2021 and *All Too Well*, too, became massive. Nevertheless, the *All Too Well* group still performed the best in the theory of mind test, further lending some credibility to Koski (2016), who claims that the highly acclaimed film critic Roger Ebert's musing regarding films as being "a machine that generates empathy" also extends to "the whole of entertainment," including, in the present context, the writerly lyrics of *All Too Well*.

5.0   Implications

Given how intricate and tangible of a role pop culture plays in our everyday lives (Delaney, 2007), future replications, specifically indirect replications, using YouTube videos, social media posts on Instagram, Tik-

Tok, or Twitter, or even superheroes/supervillains movies would be tremendously feasible. In addition to that, future replications would benefit from the explicit recruitment of speakers other than native as research participants, namely ESL speakers, English as a foreign language (EFL) speakers, or even speakers of other languages.

6.0   Limitations

Considering the short format of songs, the first limitation in this study is the participants' brief exposure to their respective song lyrics. Similarly, however, this has already been argued in the previous replications by Panero et al. (2016) and Samur et al. (2017), who corroborated that brief exposure to little snippets of literary fiction did not guarantee better performance in the theory of mind test.

The second limitation concerns the likelihood of fan bias. Fans of either Taylor Swift, the singer of *All Too Well*, or Bruno Mars, the singer of *Uptown Funk*, likely had listened to their respective songs before. Nonetheless, a counter-argument goes that sometimes even native speakers do not know the real lyrics to the popular songs that they have heard many times over. For instance, James Corden once sang "a few cherished bells" instead of "Jerusalem bells" during his carpool karaoke of the popular Coldplay song *Viva la Vida* with frontman Chris Martin (Holub, 2016).

Lastly, the third limitation in this study is the rather small size of the participants, indeed dwarfed by the hundreds recruited in the well-funded original research and its subsequent replications. However, the present more-focused case study was not funded in any shape or form, administering a short survey of only 20 RMET items instead.

7.0   Limitations

Capitalizing on our shared twenty-first century overfixation with everything pop culture, studies on the theory of mind effects are rather engaging due to their accessibility to both scholars and the general public alike. Furthermore, the sky is the limit when it comes to which media to use to test the theory of mind effects: books, films, songs, TVs, plethora forms of the arts, endless so on and so forth. Accordingly, this encourages researchers to be creative, as well as affording them a breath of nuance in pursuit of uncovering new revelations. While it is true that pop culture equips us with the occasion to numb ourselves to emotions, it stands true as well that pop culture ushers in the bright and exciting (sometimes ultra-extravagant à la *Uptown Funk*) pops of colors to our otherwise nihilistic routine life — maple lattes hidden meaning here, reference to Michelle Pfeiffer there, effectively being a double-edged sword.

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