



TUNING IN

WHILE MOST WOULD STRUGGLE TO READ *PRIDE AND PREJUDICE* WITH ANDREW WK BLARING IN THE BACKGROUND, A MELLOWER SOUNDTRACK COULD EVEN MAKE IT EASIER. TIM BYRON INVESTIGATES HOW MUSIC AFFECTS CONCENTRATION.

READING IS A difficult thing for a brain to do. It takes years of practice and hard work to be able to read fluently, which is why primary schools allocate so many hours to teaching us how to do it. Even once you're a fluent reader, concentrating on reading requires a lot of cognitive resources. It uses your ability to decipher meaning, join the dots, put things in context and, of course, resist the temptation to look at pictures of cute animals instead.

Considering that level of difficulty, listening to music at the same time as reading should be about as distracting as, say, having a full bladder. And yet in the majority of contexts that we listen to music, we're listening to it in the background, usually while occupied with other tasks such as reading.

If you think this doesn't apply to you because you're good at multi-tasking, think again. Research shows that humans are nowhere near as good at multi-tasking as we think we are.

In fact, a 2009 study led by Stanford University researcher Eyal Ophir and colleagues found people who prefer to multi-task are *worse* at multi-tasking than people who prefer doing one thing at a time.

So, based on how difficult reading is and how bad we are at doing two things at once, you'd assume listening to music while reading would be a bad idea.

Psychology professor William Forde Thompson from Macquarie University is someone who finds it difficult to listen to music and work at the same time.

"I find it immensely distracting unless the music is very quiet and not too frenetic, and even then I usually like it turned off," says Thompson. "But I also have friends who love reading and working while listening to music."

Curious as to why this was, Thompson and his colleagues asked students to read passages of text while listening to excerpts of a Mozart piano sonata that were either soft or loud and either fast or slow. They then tested the students' comprehension of the text.

They found the only kind of music that reduced comprehension was both fast *and* loud.

"You'd think that music would be hugely distracting," Thompson observes. "But in many ways, the big take-home message is that music is so very benign."

The researchers argue that one possible reason for this surprising finding is that, though music is distracting, it usually puts you in a better mood. And improving your mood increases your IQ and thus your reading ability.

"No one knows how [music] improves intellectual function," says Thompson, "but it probably does it by enhancing sustained attention or working memory."

Victoria Williamson, who runs the excellent website musicpsychology.co.uk and lectures at Goldsmiths, University of London, is impressed by Thompson's study.

"If their effect is replicable," she says, "then it stands as an interesting contribution in its own right to our knowledge of what we potentially find distracting about music."

But, as Williamson points out, there's a big difference between the piano sonatas used in Thompson's study and the kind of music most people listen to: the lyrical content.

"I suspect that the authors would have got a very different result if they had used vocal music," Williamson says.

"Introspection leads me to believe that vocal music is more distracting to reading comprehension, and there is evidence to back up this assumption."

Williamson, who tells me she often listens to classical guitar music while reading, says hearing words is inherently distracting: "It makes sense that there is some pressure for us to attend to [any] language in the environment, even if we do not want to, since it is our main communication tool," she says.

Thompson agrees that vocals are likely to be distracting: "We are planning on looking more closely at how music interacts with language," he says.

So, if you listen to loud, fast music with vocals – say, 'BOB' by OutKast or 'Highway 61 Revisited' by Bob Dylan – should you stop when you have to read something carefully?

Thompson says it depends on the individual: "There are probably individual differences in this effect, so even death metal might not interfere with reading comprehension for every person. But I bet it interferes with reading comprehension for most of the population."

What, then, should you listen to? Williamson says music is more likely to be distracting if you dislike it and if you're unfamiliar with it. So you may be best off listening to old favourites when you study, so long as the music isn't too wordy or too loud.

Personally, I wrote some of this article while listening to Brian Eno's slow, soft, instrumental *Ambient 1: Music for Airports* (1978). It's an album I like and with which I'm pretty familiar. It seemed to do the trick.

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