EXHIBIT 10

(FILED UNDER SEAL)

UNITED STATES DISTRICT COURT

NORTHERN DISTRICT OF CALIFORNIA

SAN JOSE DIVISION

CONCORD MUSIC GROUP, INC., ET AL., Plaintiffs, v. ANTHROPIC PBC, Defendant.	Case Number: 5:24-cv-03811-EKL-SVK Judge Eumi K. Lee Magistrate Judge Susan van Keulen

REBUTTAL EXPERT REPORT OF DR. BEN ZHAO

January 23, 2026

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But Dr. Bilmes does not present any evidence showing that Anthropic intended to exclude Publishers' lyrics from its Claude training corpora, rather than merely deduplicating copies of their lyrics to improve LLM performance. In other words, Anthropic seemingly has never tried to exclude Publishers' lyrics in the first place.

101. In sum, it is highly likely that Publishers' lyrics make up a larger portion of the overall dataset than Dr. Bilmes estimates. And, as I have explained previously and below, a relatively small dataset of unique text and phrases, such as Publishers' lyrics, can have a significantly high impact on LLM performance and memorization.

H. Dr. Bilmes Incorrectly Concludes Publishers' Lyrics Are Immaterial to LLM Performance

102. Dr. Bilmes argues that Publishers' lyrics have comparatively "less value for LLM training datasets" because they are "small, narrow in scope, heavily repetitive, redundant, or low in factual content."[129] While he concedes that "small and narrow-in-scope data can be valuable if it provides unique information," he opines that the "value of a chunk of data to LLM training is always relative to the much larger dataset the chunk is contained within."[130] This is incorrect because a relatively small dataset can have a significant impact on overall LLM performance, particularly if it contains highly unique texts and phrases. Such datasets are also likely to induce more memorization and regurgitation from models trained on them. As I have explained above, it is not corpus percentage that drives memorization (and regurgitation), but rather repetition in the training corpora. Even if Publishers' lyrics only constitute a tiny fraction of Claude's training corpora, the risk of memorization is nonetheless high because of their uniqueness and their repeated presence.

103. Dr. Bilmes' opinion rests on the quantitative fallacy that because the lyrics are a small fraction of the total tokens, they are "immaterial."[131] This ignores the fundamental reality

[129] Bilmes Report ¶323.
[130] *Id.*
[131] *Id.* ¶¶20, 372.

that model learning is driven by **data uniqueness and weighting**, not just raw volume. Unlike generic web text, which is often fungible, song lyrics constitute a unique, non-substitutable data class possessing distinct linguistic properties—such as rhyme, meter, and metaphor—that cannot be learned from other sources.[132] Dr. Shan's inspection of Claude's training data revealed that Anthropic explicitly values this distinctiveness by assigning English text (the category containing these lyrics) a training weight of [redacted] [133] Research consistently demonstrates that models are highly sensitive to such unique, high-quality data signals, which can disproportionately steer model capabilities even in small quantities.[134] By combining this [redacted] with the lyrics' inherent uniqueness and massive repetition (over [redacted] copies), Anthropic ensures these works exert an outsized influence on the model that far exceeds their statistical footprint.

104. Dr. Bilmes also claims Publishers' lyrics are not a high-quality training dataset because "Plaintiffs' lyrics (and lyrics in general) while stylistically rich, are short, repetitive, idiosyncratic, relatively homogenous, and highly constrained in topical breadth."[135] But these are words taken from co-founder Jared Kaplan's deposition testimony—Anthropic's own words.[136] Revealingly, Dr. Bilmes cites no other basis for this blanket assertion. Further, as an expert in the field, I am not aware of any research supporting this conclusion. Regardless, it is precisely *because* Publishers' lyrics are "stylistically rich" and "idiosyncratic" that they are valuable as training data. Also, unlike poems, lyrics are constructed by taking account of rich musical information: melody, rhythm, instrumentation, the quality of the singer's voice, other qualities of the recording, [137] as

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[132] *See* Kaplan Decl. ¶35 (Aug. 22, 2024), ECF No. 209.

[133] Shan Report ¶40.

[134] *See* Aladin Djuhera et al., *Fixing It in Post: A Comparative Study of LLM Post-Training Data Quality and Model Performance*, 39TH ANN. CONF. ON NEURAL INF. PROC. SYS. (NEURIPS) (Dec. 15, 2025), https://arxiv.org/pdf/2506.06522.

[135] Bilmes Report ¶324.

[136] *Id.* ¶324 n.599.

[137] Matthew Zapruder, *The Difference Between Poetry and Song Lyrics*, BOSTON REV. (Dec. 6, 2012), https://www.bostonreview.net/forum/poetry-brink/difference-between-poetry-and-song-lyrics/.

Dated: January 23, 2026

Ben Zhao