EXHIBIT 4

UNITED STATES DISTRICT COURT

NORTHERN DISTRICT OF CALIFORNIA

SAN JOSE DIVISION

CONCORD MUSIC GROUP, INC., ET AL.,

Plaintiffs,

v.

ANTHROPIC PBC,

Defendant.

Case No. 5:24-cv-03811-EKL-SVK

DESIGNATED HIGHLY CONFIDENTIAL ATTORNEYS' EYES ONLY

Judge Eumi K. Lee
Magistrate Judge Susan van Keulen

SECOND SUPPLEMENT TO DECEMBER 19, 2025 EXPERT OPINION OF

PROFESSOR MICHAEL D. SMITH

Dated: March 9, 2026



Michael D. Smith

1. On December 19, 2025, I issued an initial expert report in this case. *See* Expert Report of Michael D. Smith (Dec. 19, 2025) (hereinafter the "Smith Report"). On the same day, Defendant Anthropic PBC ("Anthropic") served a series of expert reports from Dr. Abhishek Nagaraj, Julie L Davis, Dr. Andrew Bray, Collin Stokes, Dr. Jeff Bilmes, and Russ B. Altman. Also on December 19, 2025, Publishers served several other expert reports, including from Joshua Dennis, Benjamin Zhao, Shawn Shan, and Hal Leonard.

2. On January 23, 2026, I served a Rebuttal Report to certain opinions of Anthropic's Dr. Nagaraj and Ms. Davis. On February 13, 2026, I served a Reply Report, responding to the rebuttal reports of Dr. Nagaraj and Ms. Davis that addressed my initial expert report. Included with my Reply Report was a first supplement to my initial expert report, updating certain findings and analysis related to the corrected version of a previously produced document that Anthropic reproduced on February 4, 2026.

3. Since the service of my Reply Report on February 13, 2026, I have become aware of certain data and research, publicly published and authored by Anthropic, and which is relevant to my expert opinions.

4. Specifically, I refer to a certain "Hugging Face" dataset called "Anthropic Interviewer" that shows the content of conversations that Claude has conducted with various individuals and professionals regarding their use of Claude, apparently in connection with the Economic Index report that I refer to in my initial expert report. *See, e.g.*, Smith Report ¶ 80. The dataset includes conversations with various "creative" professionals, including some songwriters and

musicians,[1] who describe their use of Claude and generative AI in their work, including writing lyrics.[2]

5. I also refer to two additional Hugging Face datasets published by Anthropic on January 15, 2026 that show aggregated first-party Claude API usage metrics and Claude.ai usage metrics, each based on a sample of user data from one week in November 2025, also published in connection with the Anthropic Economic Index report. [3] The datasets include "clusters" of usage data demonstrating that both API and Claude.ai users have used Claude for song-related use cases, including identifying specific songs and writing, editing, or generating song lyrics.[4]

6. Each of these Hugging Face datasets are consistent with and reinforce my opinion that Claude can be and is used to generate "new" AI-produced lyrics that may compete with and displace Publishers' lyrics, now or in the future.

7. On March 5, 2026, I understand that Anthropic authored and published a report titled "Labor market impacts of AI: A new measure and early evidence."[5] This report, which appears to rely on research gathered by Anthropic's in-house economists, claims to measure "AI

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[1] ANTHROPIC, *HuggingFace, Anthropic Interviewer* (last accessed Mar. 6, 2026), https://huggingface.co/datasets/Anthropic/AnthropicInterviewer/viewer/AnthropicInterviewer/creatives.

[2] *See, e.g.*, *id.* at Transcript ID Nos. 3, 43, 54, 69, 776, 84, 85, 110, 121.

[3] ANTHROPIC, *HuggingFace, Economic Index, Release_2026_01_15* (last accessed Mar. 9, 2026), https://huggingface.co/datasets/Anthropic/EconomicIndex/tree/main/release_2026_01_15.

[4] *See* ANTHROPIC, *HuggingFace, Economic Index, Release_2026_01_15, aei_raw_1p_api_2025-11-13_to_2025-11-20.csv* (last accessed Mar. 9, 2026), https://huggingface.co/datasets/Anthropic/EconomicIndex/tree/main/release_2026_01_15/data/intermediate; ANTHROPIC, *HuggingFace, Economic Index, Release_2026_01_15, aei_raw_claude_ai_2025-11-13_to_2025-11-20.csv* (last accessed Mar. 9, 2026), https://huggingface.co/datasets/Anthropic/EconomicIndex/tree/main/release_2026_01_15/data/intermediate.

[5] ANTHROPIC, *Labor market impacts of AI: A new measure and early evidence* (Mar. 5, 2026), https://www.anthropic.com/research/labor-market-impacts.

displacement risk" by comparing a new metric of "observed exposure" with generative AI's "theoretical capability" to displace labor in various occupational categories.

8. "Arts & media" is one of the occupational categories measured in the report. Anthropic does not expressly define which occupations fit this category, but I assume that "Poets, Lyricists and Creative Writers" are included, given that this is one of the occupations tracked in the O*Net data that Anthropic relied on and the same occupation appears in Anthropic's Economic Index. *See also* Nagaraj Rebuttal ¶ 132 (confirming Anthropic Economic Index tracks occupational usage by "Poets, Lyricists, and Creative Writers").

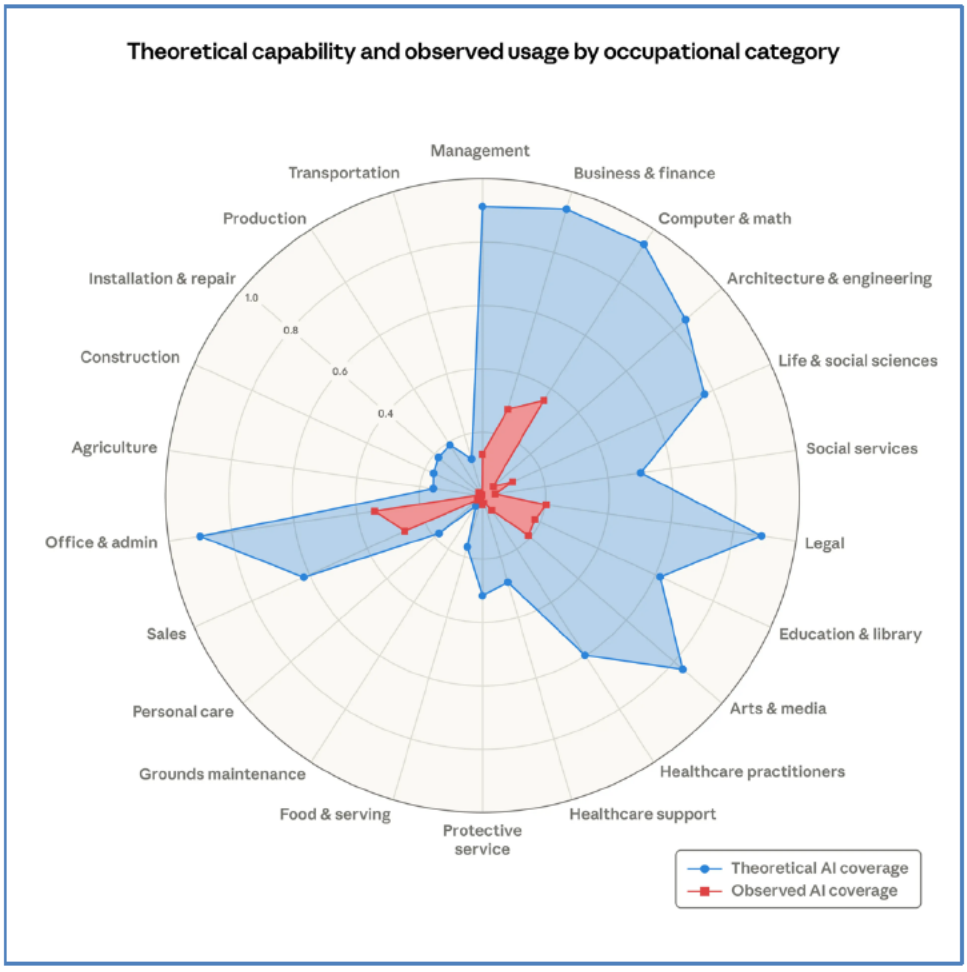


Figure 1

9. As seen in the above Figure 1, by Anthropic's own estimation, the "Arts & media" occupational category has one of the highest recorded measures of "Observed AI Coverage," at approximately 20%. According to Anthropic, "Observed AI Coverage" is meant to quantify "those tasks that LLMs could theoretically speed up, which are actually seeing automated usage in professional settings," and is measured by Anthropic's own usage data "as measured in the Anthropic Economic Index."[6] According to Anthropic, such tasks in this occupational category are defined by the "O*NET database" and includes tasks such as: (1) "Write words to fit musical compositions, including lyrics for operas, musical plays, and choral works," (2) "Write narrative, dramatic, lyric, or other types of poetry for publication," (3) "Revise written material to meet personal standards and to satisfy needs of clients, publishers, directors, or producers," and (4) "Adapt text to accommodate musical requirements of composers and singers."[7] Each of these tasks are also tracked in Anthropic's Economic Index, which reflects varying degrees of "automation" and "augmentation" by users.

10. According to Anthropic, the "Arts & media" occupational category also has one of the highest measures of "Theoretical AI Coverage," at approximately 85%. According to Anthropic, "Theoretical AI Coverage" is meant to quantify all tasks that LLMs are theoretically capable of automating. Anthropic counts "tasks that are theoretically capable with an LLM as covered if they have seen sufficient work-related usage in Claude traffic."

11. As stated by Anthropic in reference to the above graph, "[a]s capabilities advance, adoption spreads, and deployment deepens, the red area will grow to cover the blue." Anthropic

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[6] ANTHROPIC, *Anthropic Economic Index: Understanding AI's effects on the economy* (last updated Jan. 15, 2026), https://www.anthropic.com/economic-index.

[7] *See* O*NET RESOURCE CENTER (last accessed Mar. 6, 2026), https://www.onetcenter.org/database.html.

further predicts that "[t]he impacts of AI, however, might be less like COVID and more like the internet or trade with China. The effects may not be immediately clear from aggregate unemployment data; factors like trade policy and the business cycle could cloud interpretations of trend lines." These statements comport with my previously expressed opinion that damage to Publishers as a result of Anthropic's alleged infringement and training on Publishers' copyrighted lyrics are not presently quantifiable and may not be fully quantified until well after the damage is done.

12. In combination, Anthropic's Hugging Face data and Labor Market report reinforce my opinion that Anthropic will continue to improve Claude's present and theoretical capability to generate new AI-produced song lyrics that will allow and enable current and future Claude users to generate song lyrics capable of competing with Publishers' copyrighted lyrics, thereby increasing the risk of diluting and disrupting the potential market for and value of Publishers' copyrighted lyrics.

13. Last, I also understand that another of Publishers' experts, Ben Zhao, recently submitted for review and publication an academic article entitled "Characterizing Detectability and Impact of AI-generated Music on Streaming Platforms." I understand that this article was introduced to the case record during Publishers' deposition of Anthropic's expert Dr. Nagaraj. *See* Plaintiffs' Ex. 318. I have reviewed both Dr. Nagaraj's deposition transcript and the article from Ben Zhao in connection with this supplement.

14. To the extent that Anthropic serves additional expert reports or supplements any of the reports it has already served, I reserve the right to supplement my analyses and opinions.[8]

[8] I continue to reserve the right to supplement or modify my analyses based on recent or forthcoming discovery provided by Anthropic, including newly discovered information as it becomes available.