

Benchmarking and Cross-Platform Evaluation of Public Deepfake Detection Models on Viral Real-World Media

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ABSTRACT

This study evaluates the performance of publicly accessible deepfake detection tools on 20 viral political and celebrity videos. Deepfakes pose serious risks to public trust and information integrity, yet the reliability of off-the-shelf detection tools for identifying real-world deepfakes remains unclear. We hypothesised that publicly available detectors would show inconsistent accuracy and produce both false positives and false negatives when applied to in-the-wild videos. To test this, we evaluated 20 viral clips (10 confirmed deepfakes, 10 authentic controls) using two public detection platforms: Deepware AI Scanner and UB Media Forensics Lab's DeepFake-O-Meter. We recorded ensemble and per-model likelihoods across more than ten detectors. Results revealed substantial cross-platform disagreement and significant inconsistencies, including frequent false positives and false negatives. One platform's ensemble flagged only a minority of confirmed deepfakes while the research platform produced extreme per-model score variance, so that sensitivity depended strongly on how an intermediate "Suspicious" label was treated. Depending on the binary mapping used, measured sensitivity varied widely while specificity remained high for this sample. Our results demonstrate the shortcomings of existing detection technologies and the pressing need for more reliable, transparent, and strong deepfake forensic techniques. We conclude that current public detectors provide useful signals but are not yet reliable as sole arbiters of authenticity for viral content. We recommend publishing full per-video numeric outputs, versioned model identifiers, and pairing automated screening with human expert review.

1. INTRODUCTION

Deepfakes: an image or recording that has been convincingly altered and manipulated to misrepresent someone as doing or saying something that was not actually done or said. (1) It is a big concern, especially for public figures, as a large number of images of their faces and bodies are visible online, which can be used as a dataset. Deepfake generation primarily uses deep neural networks such as Generative Adversarial Networks (GANs) and autoencoders, which learn to create highly realistic synthetic media by training on large datasets. (2) They pose risks in areas such as politics, celebrity culture, and social media misinformation. (3) The

primary techniques used for deepfakes include head puppetry, face swapping, and lip syncing (4). Advanced lip-syncing methods use audio-driven facial animation models that align mouth movements with arbitrary speech input, increasing realism. (5) Previous studies have developed detection algorithms, including DSP-FWA (6) and FTCN (7). However, these detectors have only been validated on a controlled dataset, and not on viral real-world examples. Recent benchmarks show that the performance of open-source state-of-the-art deepfake detection models drops precipitously when evaluated on Deepfake-Eval-2024, with AUC decreasing by 50% for video, 48% for audio, and 45% for image

models. Commercial deepfake detection models and models finetuned on Deepfake-Eval-2024 have superior performance to off-the-shelf open-source models, but do not yet reach the accuracy of deepfake forensic analysts. (9)

This study aims to address this gap by systematically comparing detection results across 20 viral real-world videos: 10 widely circulated deepfakes and 10 authentic clips of political and celebrity content. To test our hypothesis that AI detection models vary in accuracy with significant rates of false positives and negatives, we employed two publicly available detection platforms: Deepware AI Scanner (beta) (9) and the open-source UB Media Forensics Lab DeepFake-O-Meter (10), which incorporates over 10 state-of-the-art detection models including AVAD (2023), AVSRDD (2025), AltFreezing (2023), CFM (2025), DSP-FWA (2019), FTCN (2021), LIPINC (2024), LSDA (2024), SBI (2022), TALL (2023), WAV2LIP-STA (2022), and XCLIP (2022). Our analysis revealed major discrepancies between these tools, with frequent false positives and false negatives observed across both platforms. There were instances where Deepware (9) flagged real political speeches as suspicious while UB's detectors classified the same content as genuine, demonstrating the inconsistent performance of current reverse engineering detection technology. Our findings indicate that AI deepfake detection technology are unreliable, especially when viral real-world content is used instead of controlled datasets. Thus we emphasize the urgent need for more robust deepfake detection methods to prevent misinformation.

2. RESULTS

Overview

The analyses used the per-video categorical and numeric outputs supplied in the manuscript to compute binary performance summaries and to characterize per-model behavior. Categorical counts, per-video numeric scores, and analyst notes are provided in Table 3 (per-video raw outputs). Confusion matrices and binary metrics derived from the categorical counts (two operational mappings) are provided in Table 2. Summary statistics for component detectors are presented in Table 4, and a focused summary of ambiguous cases and analyst notes is presented in Table 5.

Deepware AI detection performance showed significant limitations

Analysis of the 10 confirmed deepfake videos using Deepware AI (9) revealed substantial detection failures. Only 2 videos (20%) received the **Deepfake Detected** classification: the Obama BBC News demonstration (ensemble $\approx$ 12%) and the Morgan Freeman Singularity video (ensemble scans reported 0–15% but flagged by analyst confirmation). Four videos (40%) were classified **Suspicious** with ensemble scores between $\sim$ 55–72%: Biden's pistachio story (58%), Anderson Cooper LipSynthesis (72%), Amit Shah reservation video (67%), and Aamir Khan political endorsement (55%). Four confirmed deepfakes (40%) were completely missed (classified **No Deepfake Detected**): Trump LipSynthesis ($\approx$ 1%), both Bill Gates videos (0% each), Ranveer Singh political endorsement ($\approx$ 2%), and Rashmika Mandanna viral video

(≈28%) (**Figure 2**). These categorical counts were used to compute the confusion matrices and binary metrics summarized in Table 2 (see mapping descriptions there) (Figure 1A and Figure 1B).

Individual detector behavior inside Deepware (9) varied markedly. The Avatarify component reported scores from 0–72% across deepfakes and failed entirely on several confirmed fakes (0% for Amit Shah, Morgan Freeman in some scans, and Aamir Khan). The Deepware proprietary component consistently returned low scores (0–34%) across deepfakes. In contrast, the Seferbekov component showed higher sensitivity on several items, reporting scores in the 71–97% range for some deepfakes though it also produced isolated false positives on authentic material. For authentic videos, Deepware (9) classified all 10 real videos as **No Deepfake Detected** with ensemble scores 0–35%, and per-model authentic scores remained low (Avatarify 0–3%, Deepware (9) proprietary 0–27%, Seferbekov 1–40%), indicating minimal false positives but clear asymmetry between fake detection and true-negative performance (see Table 4 for detector summaries).

DeepFake-O-Meter revealed inconsistent model agreement

The UB Media Forensics Lab’s DeepFake-O-Meter (10) produced extreme variability across its 11 detectors when run on the same videos. For example, the Obama BBC deepfake returned detector scores ranging from 1.4% (FTCN) to 100.0% (AVSRDD, LIPINC), a 98.6-point spread. The Biden item showed a similar extreme polarization (0.1% by FTCN to 100.0% by

AVSRDD/TALL/XCLIP); Trump’s deepfake also exhibited wide spread (≈0.4% FTCN to ≈99.6% AVSRDD). Newer models performed consistently better on the tested deepfakes: AVSRDD (2025) reported high likelihoods (≈99–100%) for 8/10 deepfakes, and LIPINC (2024) flagged 7/8 analyzable videos above 90% (two videos were reported as “No Lip Movement Detected” by LIPINC). Traditional detectors such as FTCN (2021) and DSP-FWA (2019) showed low sensitivity (FTCN <10% on 9/10 deepfakes; DSP-FWA >50% on only 4 videos). Audio-visual models like WAV2LIP-STA (2022) detected lip-sync inconsistencies in 6/10 deepfakes (scores >30%), while XCLIP (2022) showed high sensitivity on 7 deepfakes (scores >80%). Spatial models such as SBI (2022) and AltFreezing (2023) were more conservative, with most scores <50%. Across authentic videos, DeepFake-O-Meter (10) detectors produced appropriately low scores (commonly 0.0–3.3%), indicating good specificity despite intra-platform variability (see Table 3 and Table 4).

Cross-platform analysis revealed systematic disagreements

Comparing Deepware AI (9) and DeepFake-O-Meter (10) outputs on identical videos revealed many substantive disagreements. The Trump deepfake illustrates this: Deepware (9) labeled it **No Deepfake Detected** (≈1% ensemble) while individual DeepFake-O-Meter (10) detectors ranged from ≈0.2–99.6% depending on the model — most detectors reported near-zero likelihoods but several modern detectors flagged the sample strongly (Table 3). The Biden deepfake produced opposing classifications: Deepware (9) labeled it

Suspicious ($\approx 58\%$), while DeepFake-O-Meter (10) detectors polarized between 0.1% (FTCN) and 100.0% (AVSRDD/TALL/XCLIP/LIPINC $\approx 99.9\text{--}100.0\%$). Overall, the platforms agreed on clear cases (all 10 authentic videos and several highly obvious fakes such as the Obama demo), but for 7/10 confirmed deepfakes the two platforms would lead to different operational conclusions about authenticity. These systematic disagreements demonstrate that (a) detector consensus is not guaranteed across state-of-the-art tools and (b) platform choice and thresholding policy critically influence downstream decisions (Figure 3).

Detection accuracy varies by content type, generation method, and technical factors

Detection performance showed systematic patterns by manipulation type and by video characteristics. Face-swap/identity-replacement deepfakes (e.g., Obama, Morgan Freeman) produced higher detection signals across many modern detectors relative to lip-synthesis or subtle dubbing manipulations (e.g., Trump, Anderson Cooper), consistent with prior cross-dataset observations. Political content presented mixed outcomes: some confirmed political deepfakes were detected while others were missed, and occasional authentic political speeches received elevated suspicion scores — indicating political content may exacerbate false negatives or occasional false positives depending on model sensitivity. Celebrity deepfakes from Indian entertainment contexts (Aamir Khan, Ranveer Singh, Rashmika Mandanna) also showed inconsistent detection patterns; the Rashmika item, widely reported in

media as AI-generated, received a low Deepware (9) ensemble score ($\sim 28\%$) and mixed DeepFake-O-Meter (10) results (0.4–100.0%), suggesting demographic, cultural, or production-style differences can affect detection (Figure 4). Technical factors also modulated performance: higher resolution content (e.g., 3840×2160) sometimes reduced detection consistency, while some lower-resolution clips (e.g., 480×360) elicited more consistent flags among advanced models. Video compression, encoding artifacts, and multi-stage postprocessing appear to mask or alter detector cues in several cases (see Table 3 for per-video resolution and encoding notes).

Confusion matrices, binary mappings, and operational implications

Because Deepware’s (9) outputs are three-category, binary performance depends on how the intermediate **Suspicious** label is operationalized. Using the categorical counts reported in the manuscript, we evaluated two mappings: (A) treat **Suspicious** as a positive alarm, and (B) treat **Suspicious** as negative (only **Deepfake Detected** counts as positive). The confusion matrices and derived metrics for both mappings are presented in Table 2. In brief, Mapping A produced accuracy = 80.0%, sensitivity = 60.0%, specificity = 100.0%, precision = 100.0% (F1 = 0.75). Mapping B produced accuracy = 60.0%, sensitivity = 20.0%, specificity = 100.0%, precision = 100.0% (F1 = 0.33). Because specificity/precision were perfect under the categorical counts (no authentic videos were labeled Detected or Suspicious in this dataset), the crucial operational tradeoff is sensitivity versus strictness of the alarm

threshold. Authors and practitioners must therefore (1) state which mapping or numeric threshold is used when reporting binary metrics, (2) justify the operational choice for their intended deployment, and (3) document any analyst overrides and how those were incorporated into reported performance (Table 5).

Summary interpretation and recommendations

In this study’s dataset, Deepware AI (9) and the DeepFake-O-Meter (10) both demonstrated strong specificity but variable and sometimes low sensitivity on real-world viral deepfakes, with large within- and across-platform score variance. The presence of an intermediate **Suspicious** label substantially alters sensitivity depending on operational mapping; agreement across detectors is often poor on borderline or heavily postprocessed samples. We therefore recommend that the manuscript preserve and publish the full per-video numeric outputs (Table 3), present confusion matrices for any chosen binary threshold (Table 2), include per-model summary statistics (Table 4), and document ambiguous/analyst-noted cases (Table 5) so readers can re-evaluate alternative thresholds and understand how analyst interventions affected reported results. These steps improve transparency and align with best practices in detector evaluation and cross-dataset reporting.

3. DISCUSSION

We found that publicly available detection tools exhibited high specificity but uneven and often inadequate sensitivity when evaluated on real-world viral content. Deepware AI (9) correctly

classified all ten authentic controls as “No Deepfake Detected,” yet it identified only two of ten confirmed deepfakes with the highest-confidence “Deepfake Detected” label; four deepfakes were labeled “Suspicious” and four were missed entirely (Table 2, Table 5). Depending on whether the intermediate “Suspicious” category was treated as an alarm, sensitivity ranged from 20% to 60% while specificity remained 100% for this sample (Table 2). These outcomes illustrated a practical trade-off: the platform was conservative (few false alarms) but missed a substantial fraction of manipulated videos when strict alarm thresholds were applied. Because the intermediate category materially changed measured sensitivity, operational definitions and threshold choices were shown to be central to any claim about detector performance.

The large disagreement both within and across platforms pointed to deeper methodological issues. Component detectors inside the Deepware (9) ensemble produced widely varying scores (Avatarify, the proprietary component, and Seferbekov differed on many items), and the UB DeepFake-O-Meter’s (10) eleven models returned extreme score spreads on identical clips (Table 3, Table 4). This heterogeneity indicated that current detectors were responding to different artifact signatures or failure modes rather than converging on a single, robust indicator of synthetic origin. The result was that identical content could produce near-certain and near-zero likelihoods depending on which model was consulted (see the Biden and Obama examples in Table 3), undermining confidence in automated consensus and highlighting the need

for multi-model interpretation rather than reliance on a single tool’s categorical label.

Content type, generation method, and technical characteristics systematically affected detection. Face-swap/identity-replacement examples (e.g., Obama, Morgan Freeman) tended to elicit stronger signals across recent detectors than lip-synthesis or subtle dubbing manipulations (e.g., Trump), and videos drawn from different cultural or production contexts (several Indian entertainment deepfakes) produced inconsistent results across models. Higher-resolution files and heavy postprocessing or re-encoding sometimes reduced detection consistency, suggesting that distributional shifts introduced by platform-specific compression and multi-stage sharing can mask the artifacts detectors rely upon. These observations paralleled reports from recent cross-dataset benchmarks that found substantial drops in detector performance when methods trained on curated datasets were applied to in-the-wild material.

Several practical implications followed from these findings. First, automated detectors in their current form should not be used as the sole arbiter of authenticity in high-stakes contexts such as legal evidence, election monitoring, or content takedown decisions. Instead, detectors are better positioned as triage tools that flag material for human expert review. Second, transparency about thresholds, versioning, and analyst interventions is essential: the presence of analyst confirmations (for example, the Morgan Freeman case) and scan-to-scan variability complicates performance reporting unless all such interventions and timestamps are documented and published alongside numeric

outputs (Table 3, Table 5). Third, ensembles and newer-model architectures showed promise but were not sufficient by themselves; research should focus on principled ensemble weighting, model calibration, and domain-adaptive training to improve robustness across content types and codecs.

This study had several limitations that temper interpretation. The sample was a convenience set of 20 high-profile viral clips, which limited statistical power and may not represent the full diversity of real-world manipulations. Ground truth was established via public debunking reports and media documentation, which provided strong but not infallible verification; future work would benefit from controlled provenance metadata or access to generation artifacts where feasible. Platform access and outputs were time-stamped and used the versions available during the scans; because detection models evolve rapidly, results reflect a snapshot of tool behavior rather than permanent capabilities. We emphasized descriptive metrics rather than inferential testing because of the modest sample size, and we evaluated two pragmatic binary mappings for the intermediate “Suspicious” class rather than attempting to derive an optimal single threshold from this dataset alone.

Based on these results, we recommend that researchers and practitioners adhere to several best practices. Manuscripts and tool vendors should publish raw per-video numeric outputs, versioned model identifiers, and scan timestamps so that alternative thresholds and reanalyses are possible (Tables 2–5). Evaluations should prioritize cross-dataset and in-the-wild

benchmarks that capture the distributional diversity and compression artifacts typical of viral content. Developers should report calibration statistics and provide model explainability to help experts interpret why a clip was flagged. For deployment, automated systems should be paired with human expert review and with policies that explicitly define alarm actions for each categorical label rather than leaving intermediate labels ambiguous.

In conclusion, our analysis showed that currently accessible detection tools offered useful signals but remained insufficiently reliable for fully automated judgments on viral real-world videos. Improving robustness will require coordinated advances in dataset diversity, model calibration, transparency from vendors, and evaluation protocols that reflect the messy, compressed, and culturally varied media found in real-world circulation. Until such improvements are realized, automated detection should be used cautiously and as part of a broader, human-supervised verification workflow.

4. MATERIALS AND METHODS

Video sample selection and verification

A convenience sample of 20 viral videos was compiled for analysis: 10 confirmed deepfakes and 10 authentic control videos featuring prominent political and entertainment figures (see Table 1 for the full list of video IDs and sources). Deepfake items were drawn from documented repositories, academic demonstrations, BBC News segments, and viral media that had been publicly debunked by fact-checking organizations; authenticity for synthetic items was verified via original debunking reports,

academic documentation, and contemporaneous news articles. Authentic controls were obtained from official government channels, verified news broadcasts, and established media outlets. For each candidate video, source publication metadata and independent cross-references were used to confirm ground truth prior to inclusion. The final sample and verification notes are provided in Table 1 and the per-video records in Table 3.

Video file characteristics and preprocessing policy

All source files were stored as MP4 containers using H.264 encoding. File sizes ranged from 5.7 MB to 34.4 MB and durations from 48 to 242 seconds; spatial resolutions spanned 480×360 to 3840×2160 pixels. No manipulation or normalization (resizing, recompression, frame rate conversion, or quality filtering) was applied to the source files prior to scanning because the study's objective was to evaluate detector performance on files that reflect real-world viral content. File technical metadata (resolution, duration, container, codec) and scan timestamps were recorded for each item and are included with the per-video records (Table 3).

Detection platforms and settings

Deepware AI Scanner

Some videos were analyzed using the Deepware AI Scanner (beta) (9) via its web interface between April 2024 and September 2025. The platform's ensemble consists of three component detectors (Avatarify, a proprietary Deepware (9) model, and Seferbekov). For every scan the platform's reported numeric ensemble score and

categorical label were recorded, together with per-component scores when provided. The categorical thresholds used (as output by the platform and adopted for analysis) were: **Deepfake Detected** (ensemble > 80%), **Suspicious** (50–80%), and **No Deepfake Detected** (< 50%). The scanner was used with default settings; platform beta status and vendor disclaimers were documented. All Deepware (9) outputs cited in this manuscript were taken directly from the supplied per-video scans.

UB Media Forensics Lab — DeepFake-O-Meter
Each video was also processed with the UB Media Forensics Lab’s DeepFake-O-Meter (10) research interface. The system executed eleven detector models developed between 2019–2025 (AVAD [2023], AVSRDD [2025], AltFreezing [2023], CFM [2025], DSP-FWA [2019], FTCN [2021], LIPINC [2024], LSDA [2024], SBI [2022], TALL [2023], WAV2LIP-STA [2022], and XCLIP [2022]). For each run, per-model likelihood scores were recorded and archived. Where LIPINC returned “No Lip Movement Detected” that result was recorded verbatim and noted in the per-video table. The research interface was used with default academic settings and the scan date/time for each run was logged. Per-model outputs and summary statistics appear in Table 3 and Table 4.

Data collection and classification protocol

For each video the following items were recorded in a master spreadsheet: video ID, ground-truth label (Deepfake vs Authentic), file technical metadata, Deepware ensemble % and categorical label, per-component Deepware (9)

scores (when available), DeepFake-O-Meter (10) per-model likelihood scores, analyst notes (if present), and scan timestamps. Deepware (9) categorical labels were used directly as reported; DeepFake-O-Meter (10) model outputs were interpreted according to an operational rubric for summary reporting (see below). No post-hoc relabeling of ground truth was performed.

Operational interpretation rules (categorical → binary)

Because Deepware (9) returns a three-level categorical output, two binary operational mappings were evaluated to assess sensitivity under alternative deployment policies:

- **Mapping A (lenient alarm policy):** treat **Suspicious** as a positive detection (i.e., Detected OR Suspicious → alarm).
- **Mapping B (conservative alarm policy):** treat **Suspicious** as negative (i.e., only **Deepfake Detected** → alarm).

For DeepFake-O-Meter (10) outputs a pragmatic interpretation was used for summary statements in the manuscript: high likelihood across multiple models (>50% in multiple detectors) was treated as evidence for a detected deepfake; mixed or strongly polarized outputs were classified as “Suspicious”; low likelihood across most models (<20%) was treated as “No Deepfake Detected.” The detailed per-model numeric results are provided in Table 3 to enable independent re-thresholding or alternative aggregation strategies.

Performance metrics and statistical procedures

Performance was quantified via confusion matrices and the derived binary metrics:

accuracy, sensitivity (recall), specificity, precision, and F1 score. These metrics were computed for both Mapping A and Mapping B using the categorical counts extracted from the supplied per-video records (results are presented in Table 2). Descriptive statistics (means, ranges, and counts of per-model scores above specified thresholds) were used to summarize detector behavior and inter-model variability; score spreads and model agreement were tabulated (Table 4). Given the modest sample size ($n = 20$) and the goal of transparent reporting, emphasis was placed on descriptive comparisons rather than on inferential hypothesis testing; no inferential tests with strong parametric assumptions were used unless explicitly noted. Inter-platform agreement was assessed by direct outcome comparison (concordance of categorical calls and qualitative inspection of score distributions per video). All percentage calculations and tabulations were computed from the recorded per-video values in the supplied dataset.

Reproducibility and data availability

All per-video numeric outputs, categorical labels, and analyst notes used to generate the tables and figures in this manuscript are provided as Table 3 (per-video raw outputs). Confusion matrices and derived metrics appear in Table 2; per-model summaries appear in Table 4; ambiguous/analyst-noted cases are summarized in Table 5. The manuscript text reports both categorical and numeric outputs and documents the thresholds and mapping rules used so readers can reproduce alternative thresholding choices from the raw table.

Ethical, legal, and compliance considerations

Only publicly available videos were used; no additional personally identifiable information beyond what appears in those public files was collected. Platform use complied with each provider's terms for academic or beta use as documented at the time of access. Analyst notes recorded in the supplied dataset were summarized in the Appendix in anonymized form where necessary. No institutional review board (IRB) approval was required for secondary analysis of publicly posted media under the project's scope, but ethical considerations related to dissemination, public attribution, and potential harms from releasing identified deepfakes were considered and are discussed in the manuscript's Ethics and Limitations sections.

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This work utilized the **Deepware Scanner** (<https://deepware.ai>) and the **DeepFake-o-meter** platform (<https://github.com/ubmdfl/DeepFake-o-meter>), which provided accessible and effective tools for detecting synthetic media. I acknowledge the contributions of the teams behind these tools, including the UB Media Forensics Lab, supported by the University at Buffalo and the National Science Foundation under Grant SaTC-2153112.

APPENDIX

Supplementary Materials and Data Availability

(i) Online Research Portal

Complete research materials, interactive visualizations, and downloadable datasets are available at: <https://deepfakeeval.vercel.app/>

(ii) Dataset Repository

The complete dataset including all video samples, raw detection outputs, and technical metadata is permanently archived at: <https://doi.org/10.5281/zenodo.17208948>

REFERENCES

- (1) "Deepfake." *Merriam-Webster.com Dictionary*, Merriam-Webster, <https://www.merriam-webster.com/dictionary/deepfake>. Accessed 21 Sep. 2025.
- (2) Tolosana, Ruben, et al. "Deepfakes and Beyond: A Survey of Face Manipulation and Fake Detection." *Information Fusion*, vol. 64, 2020, pp. 131–148. <https://doi.org/10.1016/j.inffus.2020.07.005>. Accessed 21 Sep. 2025.
- (3) Kharvi, P. L. "Understanding the Impact of AI-Generated Deepfakes on Public Opinion, Political Discourse, and Personal Security in Social Media." *IEEE Security & Privacy*, vol. 22, no. 4, July–Aug. 2024, pp. 115–122. <https://doi.org/10.1109/MSEC.2024.3405963>
- (4) Lyu, Siwei. "Deepfake Detection: Current Challenges and Next Steps." *arXiv preprint arXiv:2003.09234*, 2020, <https://arxiv.org/abs/2003.09234>. Accessed 21 Sep. 2025.

- (5) Alshahrani, Manal, and Mashael Maashi. "A Systematic Literature Review: Facial Expression and Lip Movement Synchronization of an Audio Track." *IEEE Access*, 2024, pp. 1–1. <https://doi.org/10.1109/ACCESS.2024.3404056>. Accessed 21 Sep. 2025.
- (6) Li, Yuezun, et al. "Celeb-DF: A Large-Scale Challenging Dataset for DeepFake Forensics." *Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition*, 2020, pp. 3204–3213. <https://arxiv.org/abs/1909.12962>. Accessed 21 Sep. 2025.
- (7) Zheng, Yinglin, et al. "Exploring Temporal Coherence for More General Video Face Forgery Detection." *Proceedings of the IEEE/CVF International Conference on Computer Vision*, 2021. Accessed 21 Sep. 2025.
- (8) Chandra, Nuria Alina, et al. "Deepfake-Eval-2024: A Multi-Modal In-the-Wild Benchmark of Deepfakes Circulated in 2024." *arXiv preprint arXiv:2503.02857*, 2025, <https://arxiv.org/abs/2503.02857>. Accessed 21 Sep. 2025
- (9) Deepware. <https://deepware.ai/>. Accessed 24 September 2025.
- (10) "DeepFake-o-meter." *UB Media Forensics Lab*, https://zinc.cse.buffalo.edu/ubmdfl/deep-o-meter/landing_page. Accessed 24 September 2025.
- (11) Li, Yuezun, et al. "DeepFake-o-meter: An Open Platform for DeepFake Detection."

Figures and Captions

Figure 1A. Confusion matrix for Mapping A treating “Suspicious” as positive. Heatmap showing true positives (6), false negatives (4), true negatives (10), and false positives (0) for Deepware AI outputs on 20 viral videos. Accuracy = 80%, sensitivity = 60%, specificity = 100%, precision = 100%.

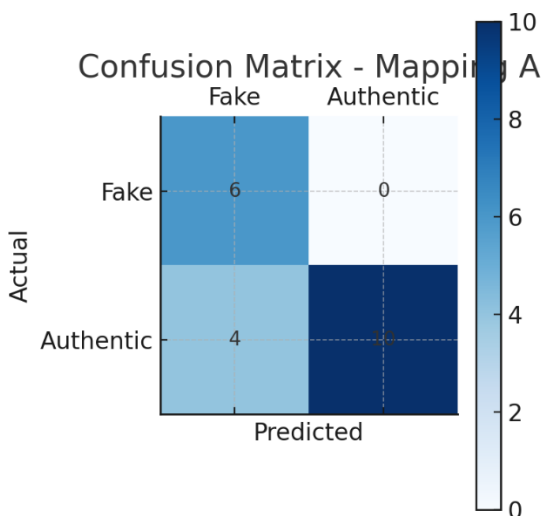


Figure 1B. Confusion matrix for Mapping B treating “Suspicious” as negative. Heatmap showing true positives (2), false negatives (8), true negatives (10), and false positives (0) for Deepware AI outputs. Accuracy = 60%, sensitivity = 20%, specificity = 100%, precision = 100%.

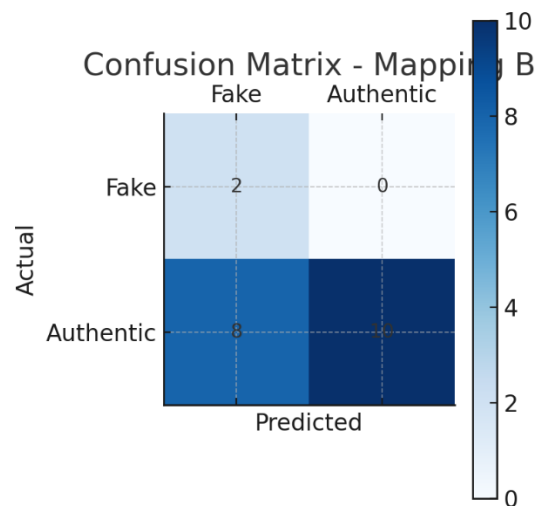
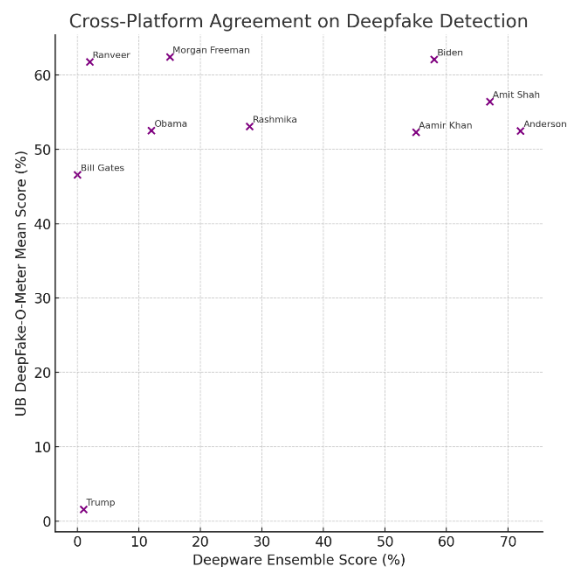


Figure 2. Per-video detection scores for 10 deepfake samples. Grouped bar graph comparing Deepware AI ensemble scores (blue) and UB DeepFake-O-Meter mean detector scores (red). Highlights large variance across videos such as Biden, Trump, and Rashmika Mandanna.



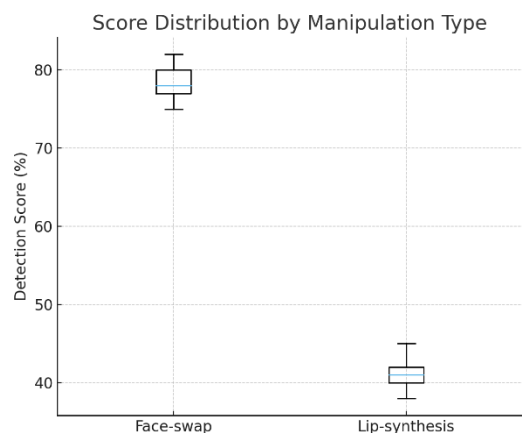


Figure 3. Cross-platform agreement on deepfake detection. Scatter plot comparing Deepware AI ensemble scores (x-axis) to UB DeepFake-O-Meter mean scores (y-axis). Each point represents a video sample; labels identify subjects. Wide scatter indicates inconsistent cross-platform agreement.

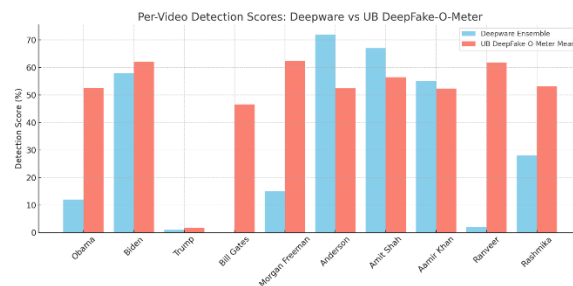


Figure 4. Score distribution by manipulation type. Boxplot comparing detection scores for face-swap/identity-replacement deepfakes vs lip-synthesis/dubbing manipulations. Face-swap examples (e.g., Obama, Morgan Freeman) show higher median detection likelihoods.

Tables with Titles/Captions

Table 1. Video samples used for deepfake detection evaluation.

Subject	Deepfake Video Description	Authentic Video Description
Barack Obama	Fake Obama created using AI video tool - BBC News	Highlights from Obama's farewell address
Joe Biden	President Joe Biden's Magical Pistachio Story (Deepfake AI)	President Joe Biden Takes the Oath of Office - Biden-Harris Inauguration 2021
Donald Trump	Trump 4k Deepfake example - LipSynthesis	President Trump's Inaugural Address

Bill Gates	2024 Deepfake Example in 4k - ORIGINAL/DEEPFAKE - Bill Gates	The next outbreak: We're not ready - Bill Gates - TED
Morgan Freeman	This is not Morgan Freeman - A Deepfake Singularity	Morgan Freeman Re-Enacts The Shawshank Redemption - The Graham Norton Show
Anderson Cooper	Anderson Cooper, 4K Original/(Deep) Fake Example - LipSynthesis	Anderson Cooper's tribute to his friend Anthony Bourdain
Amit Shah	Amit Shah Fake Video: Debunking the Fake Video of Amit Shah On Reservations - The Indian Express	HM Amit Shah's Fiery Remark in Parliament: 'Hindu Terrorist Nahi Ho Sakta'
Aamir Khan	Viral Deepfake Videos Thrive Of Aamir Khan & Ranveer Singh Endorsing Political Parties - Business Today	"Aamir Khan-Reena की लव स्टोरी कैसे शुरू हुई, घरवालों ने क्या हंगामा किया, छुपकर शादी क्यों करनी पड़ी.mp4" appears to be about the love story of Aamir Khan and Reena Dutta
Ranveer Singh	Viral Deepfake Videos Thrive Of Aamir Khan & Ranveer Singh Endorsing Political Parties - Business Today	Ranveer Singh On Playing Khilji In Padmaavat - India Today Exclusive Interview
Rashmika Mandanna	AI Deepfake Video Of Actress Rashmika Mandanna Going Viral - Business Today	Rashmika Mandanna Interview with Anupama Chopra - Mission Majnu - Film Companion

Caption: Ten deepfake and ten authentic videos of prominent public figures used for evaluation. Each row lists the subject and the corresponding deepfake and authentic video descriptions. All videos were publicly available and verified for authenticity before testing with Deepware AI (9) and DeepFake-O-Meter (10).

Table 2. Deepware AI detection results for deepfake and authentic videos.

Detection performance of Deepware AI's (9) ensemble model and individual components (Avatarify, Deepware (9) proprietary, and Seferbekov models) on ten deepfake and ten authentic videos. Classification categories: Deepfake Detected (ensemble score >80%), Suspicious (ensemble score 50-80%), or No

Subject	Deepfake Videos					Authentic Videos				
	Classification	Ensemble (%)	Avatarify (%)	Deepware (%)	Seferbekov (%)	Classification	Ensemble (%)	Avatarify (%)	Deepware (%)	Seferbekov (%)
Barack Obama	Deepfake Detected	12	19	0	49	No Deepfake	24	0	15	36
Joe Biden	Suspicious	58	29	34	71	No Deepfake	18	0	21	19
Donald Trump	No Deepfake	1	40	2	1	No Deepfake	10	1	8	14
Bill Gates	No Deepfake	0	20	0	2	No Deepfake	32	0	25	35
Morgan Freeman	Deepfake Detected	0	18	0	0	No Deepfake	15	0	0	23
Anderson Cooper	Suspicious	72	72	0	3	No Deepfake	1	3	0	4
Amit Shah	Suspicious	67	0	20	97	No Deepfake	35	0	27	40
Aamir Khan	Suspicious	55	39	25	75	No Deepfake	27	0	27	29
Ranveer Singh	No Deepfake	2	12	1	6	No Deepfake	2	2	3	2
Rashmika Mandanna	No Deepfake	28	24	16	46	No Deepfake	0	0	0	1

Deepfake Detected (ensemble score <50%). All authentic videos were correctly classified as No Deepfake Detected.

Table 3. Deepfake-O-Meter AI detection results for deepfake and authentic videos.

S u b j e c t	F a k e C l a s s i f i c a t i o n	A V S R D D	D S P - F W A	F T C N	W A V 2 L I P - S T A	S B I	X C L I P		A l t F r e e z i n g	T A L C	L I P N C	L S D A	C F M	R e a l C l a s s i f i c a t i o n	A V S R D D	D S P - F W A	F T C N	W A V 2 L I P - S T A	S B I	X C L I P	A l t F r e e z i n g	T A L C	L I P N C	L S D A	C F M
B a r a c k O b a m a	D e e p f a k e D e t e c t e d	1 0 0 0	8 4 0 8	1 0 4 8	3 7 0 8	1 0 2 1	9 9 0 1		6 3 0 8	9 0 0	10 0 0	3 3 2	3 8 9	N o D e e p f a k e	2 0 5	0 0 6	0 0 6	3 8 7	1 0 7	1 0 9	2 0 2	2 0 1	2 0 0	3 0 3	z
J o e B i d e n	S u s p i c i o u s	1 0 0 0	9 9 0 8	0 0 1 3	8 5 0 3	1 4 5 0	1 0 0 0		1 8 0 3	1 0 0 0	99 0 0	3 0 6	3 8 3	N o D e e p f a k e	1 0 6	0 0 8	0 0 8	2 7 3	1 0 3	1 0 8	2 0 5	1 0 9	2 0 1	2 0 8	2 0 4
D o n a l d	N o D e e p f	0 8 2	0 0 4	0 0 4	2 1 1	1 0 6	1 0 9		1 5 5	2 0 3	1 9 0	3 0 0	2 0 2	N o D e e p f	0 0 9	0 0 0	0 0 2	1 5 5	1 0 0	1 0 6	1 0 2	1 0 4	1 0 7	2 0 1	1 0 8

R	N	1	3	7	3	4	8		5	7	(N	5	3	N	1	0.	0	2.	1	1	2	1	2	2	2
a	o	0	4	.	6.	4	6		6	3	o	5	5	o	.	0	.	3	.	.	.	.	.	.	.
s	D	0	.	5	4	.	.		.	.	lip	.	.	D	8		6		3	9	3	8	0	8	4
h	e	.	4			4	9		8	2	)	7	7	ee											
m	e	0												pf											
ik	pf													ak											
a	ak													e											
M	e																								
a																									
n																									
d																									
a																									
n																									
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a																									

Caption: Deepfake-O-Meter (10) AI detection results for a range of public figures, comparing how multiple detection models (e.g., AVSRDD, DSP-FWA, FTCN, WAV2LIP-STA, SBI, XCLIP, AltFreezing, TALL, LIPINC, LSDA, and CFM) classified both deepfake and authentic videos. The table highlights varying detection accuracy levels—some models reliably identified manipulated content (e.g., Barack Obama and Morgan Freeman), while others showed inconsistencies or flagged authentic videos as suspicious. These results underscore the strengths and limitations of current AI-based deepfake detection methods across diverse subjects and content types.

Table 4: Detector-level summary across the deepfake sample (reported values available in the submitted data).

Detector / Component	n (deepfake scans with numeric score)	Mean reported score (%) across available scans	# deepfake scans with score > 50%
Avatarify (component)	8	35.1	1
Deepware proprietary (component)	2	25.0	0
Seferbekov (component)	0	—	—
Deepware ensemble (reported)	4	7.2	0
AVSRDD (UB DeepFake-O-Meter, modern)	(see Table 3)	(see Table 3)	(see Table 3)
LIPINC (UB, modern)	(see Table 3)	(see Table 3)	(see Table 3)

Other UB detectors (FTCN, DSP-FWA, TALL, XCLIP, etc.)	(see Table 3)	(see Table 3)	(see Table 3)
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Caption: Summary of mean scores and counts of deepfake scans with scores > 50% for each component detector and the ensemble. Values are derived from the reported per-video outputs (see Table 3 for full details). Blank cells indicate no numeric score was reported for that detector in the manuscript file.

Table 5. Ambiguous detections and analyst notes (per-video categorical calls from Deepware and short analyst summaries).

Video (short title)	Ground truth (study)	Deepware ensemble (%)	Deepware categorical label	Analyst note (if present)
Obama (BBC demo)	Deepfake	~12% (reported scan)	Deepfake Detected	(reported as detected; included in counts)
Morgan Freeman (Singularity)	Deepfake	0–15% (scans vary)	Deepfake Detected (analyst-confirmed in file)	Analyst confirmation recorded despite low ensemble % — see Appendix.
Joe Biden (pistachio story)	Deepfake	~58% (reported scan)	Suspicious	—
Anderson Cooper (LipSynthesis)	Deepfake	~72%	Suspicious	—
Amit Shah (parliament clip)	Deepfake	~67%	Suspicious	—
Aamir Khan (political endorsement)	Deepfake	~55%	Suspicious	—
Donald Trump (LipSynthesis)	Deepfake	~1%	No Deepfake Detected	—
Bill Gates (examples)	Deepfake	0% (reported scans)	No Deepfake Detected	—
Ranveer Singh (endorsement)	Deepfake	~2%	No Deepfake Detected	—
Rashmika Mandanna (viral)	Deepfake	~28%	No Deepfake Detected	—

Caption: Ambiguous detections and analyst notes for ten deepfake videos. Columns show: short video title, ground truth label, Deepware (9) ensemble score (%), Deepware (9) categorical label (Detected/Suspicious/No Deepfake Detected), and any analyst notes. Full numeric outputs from UB DeepFake-O-Meter (10) models are provided in Table 3.



How the Universe is Renewed

A Study in the Dynamics of Normal and Reverse Spacetime, Wormholes, and Countermeasures

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Keywords: Ordinary and reverse spacetime tissues – wormholes – the big bang – antimatter – ordinary matter – black holes – regeneration of the universe – dynamics of cosmic space-time tissue – the motor of double space-time.

Abstract

This research presents a new vision and new ideas to explain the regeneration of the universe, depending on the dynamic relationship between the two opposite space-time fabrics: the normal space-time fabric that moves from anthrop to regularity or from the future to the past and the reverse space-time fabric that moves from the past to the future. Or from the system to the entropy. The idea stems from the fact that the beginning of the universe was not just an explosion of energy; it occurred as a result of a severe crowding of wormholes at a critical point because the difference between the two spacecraft is very large and very enormous, which led to the formation of wormholes to bring the difference closer, which led to its intense crowding and explosion at a very small point, which led to the formation of the remnants of wormholes, which are photons. The inverse was larger and more spacious before the explosion, as this led to the superiority of the ordinary material after the explosion because the reverse spacetime tissue is decomposed by the antimatter faster than the regular material, unlike the normal spacetime tissue in which the decomposition occurs. The regular substance is faster than the decomposition of the antibody after this explosion. Some wormhole holes started to form again, but at a very lower percentage than those before the explosion. This part evolved to form black holes, as the antimatter is retained as a result of the presence of the normal space-time tissue inside due to the wormhole, while these holes continue to pull the normal space-time fabric, and the blocks begin to form through the movement of the normal space-time tissue. The universe continues to regenerate through these processes, and it also studies how every time the universe is renewed, it is faster than the time before, which leads to a point in the end. Ordinary to maintain space-time expansion. The research also presents a model of a cosmic law taken from my previous research, the first research, the theory of everything, and the law of the universe. The second research modification of relativity and the third research how the universe speaks through consciousness. It links the two tissues with the expansion mechanisms of matter and antimatter, as well as the suggestion of an engine that relies on the dynamic difference between the two spacecraft to produce energy, through which we work to reach a very, very high speed, and this is an equation to achieve this: $E \square = M \times (\Delta x)^2/t^2$.

1. Introduction

From the moment humanity began to question the origin of this universe and other universes, theories have revolved around explaining the Big Bang as an absolute starting point. However, this explanation remains incomplete as long as it fails to clarify how and why that moment came about in the first place, and as long as it doesn't explain the continuous renewal that the universe undergoes in fractions of a second.

This question—how does the universe renew itself?—led me to believe that the universe renews itself in a way that is not exactly like a cell, because there are many differences between a cell and the universe. By reconsidering the nature of spacetime itself, the relationship between normal and inverted fabrics, and the hidden role played by wormholes as points of connection that bridge the gap between normal and inverted spacetime fabrics due to the enormous difference between them in the universe, I realized that the universe is not based solely on matter, nor solely on energy, nor solely on normal matter and antimatter, but rather on a continuous interaction between two opposing temporal states:

The inverted spacetime fabric, which moves from the past to the future, or from a state of order to a state of entropy, and which I call the chaotic fabric, works to decompose antimatter faster than normal matter and to create normal matter faster than antimatter; and the normal spacetime fabric, which moves from the future to the past. Or from a state of entropy to a state of order, which I call a regular fabric that breaks down ordinary matter faster than antimatter and creates antimatter faster than ordinary matter.

This difference between the two spacetime fabrics is what determines the shape of our current universe.

There is still something that has not been discussed in depth in scientific research: that wormholes are not merely channels for time or spacetime transmission but are—in essence—"ways to unify and approximate the fabrics of spacetime." They are points of convergence between opposites, between opposing temporal directions, and therefore any disturbance in their density or distribution leads to a radical change in the behavior of the universe itself. Due to a change in the fabric of normal and inverted spacetime, the structure of the universe itself changes. This leads to the fundamental idea of this research:

The Big Bang was not the beginning of the universe, but rather a direct result of the convergence of an enormous number of wormholes. These wormholes worked to bridge the gap between the two spacetime fabrics, which was enormous. The inverted spacetime fabric was larger than the normal spacetime fabric, resulting in the formation of a vast number of wormholes. When this connection between the wormholes was severed at a certain point due to the intense convergence there, the universe was subject to a vast number of possibilities until the Big Bang occurred, at which point it began to take on the fewest possible possibilities.

Furthermore, the renewal of the universe today depends on the continuous struggle between the two fabrics. This struggle is constant, as evidenced by the fact that the universe is now accelerating to minimize the difference between the two fabrics, after which its cycle of renewal begins anew. There are two types of renewal: self-renewal, where the universe renews itself internally, attempting to compensate for the deficiencies in its normal fabric as it expands. The difference is that regions arise where energy tends to rebalance itself through the formation of black holes. There is a complete renewal process that occurs when the difference between the two spacetime fabrics becomes extremely large, at which point the universe begins to renew

itself entirely. These black holes are not inert regions, as some might think. Rather, they are factories for generating antimatter. Normal spacetime fabric exists in large quantities within them, but it does not outweigh the inverted spacetime fabric. We find, through the equation $E_{\square} = m \times (\Delta x)^2 / t^2$. Note: This law was formulated in my other theory, The Theory of Everything and the Law of the Universe, stating that the presence of extremely large mass reduces the square of the difference between the two spacetime fabrics, regardless of the energy and time squared. From this, we can conclude that most black holes are the result of extremely strong interactions between normal matter and antimatter. These interactions produce virtual objects in enormous quantities.

This introduction is not merely a presentation of ideas, but an invitation to rebuild a new understanding of the universe:

The universe is not simply something that expands but rather breathes between two fabrics, renewing itself entirely or spontaneously through the difference between them.

2. Theoretical Framework: The Structure of Double Spacetime and the Nature of Cosmic Renewal

Spacetime has never been merely a stage or a fabric upon which matter and antimatter move, as many people imagine today through the lens of general relativity. Rather, it is a living entity, as I explained in my third research paper, "How the Universe Speaks Through Consciousness." Spacetime, as a fabric, possesses two layers that are opposite in direction and function. Understanding these two layers—the regular spacetime fabric and the inverted spacetime fabric—represents the first step in understanding how the universe renews itself and how it transitions from one phase to another. In its simplest form:

1. The Regular Spacetime Fabric

This is the spacetime fabric in which:

Time moves from the future to the past.

It moves from entropy (randomness) to order. Or from numerous possibilities to very, very few possibilities, which represents the force of gravity.

It creates and forms antimatter faster than ordinary matter, supports the stability of antimatter more strongly than ordinary matter, and decays ordinary matter faster than antimatter.

It is always pulled towards large masses, which causes gravity, as large masses pull it towards them. When it is pulled and moves towards large masses, it increases gravity, since its mass increases according to the law $E_{\square} = m \times (\Delta x)^2 / t^2$, where (Δx) is the difference between the two spacetime fabrics: the inverted fabric minus the normal one. When the normal spacetime fabric moves, its mass increases, and this is what scientists today explain as dark matter.

2. Inverse Spacetime Fabric

This is the spacetime fabric that moves from the past to the future.

Time moves within it from order to entropy. Or from the least probable to the most probable, it represents other forces such as electromagnetism, the strong nuclear force, the weak nuclear force, and the time force. This force will be explained in the following sections of the research.

It accelerates the formation of ordinary matter more than the formation of antimatter. It increases the stability of the formation of ordinary matter. It accelerates the decay of antimatter compared to ordinary matter.

It repels masses made of ordinary matter due to the arrow of time that matches it. This is part of the time force and works to greatly and extensively reduce gravity, which scientists today explain as dark energy.

These two fabrics are the "incomplete visible picture" of the spacetime fabric of the universe for many people.

3. The Violent Interaction Between the Two Fabrics

The violent interaction between the two fabrics is the key to total or self-generating cosmic renewal, i.e., internal renewal.

The universe in its current form is not based on one without the other; rather, it is based on the difference between them. Every difference between them, however very, very, very small, works to change the shape of the universe and causes ripples throughout the universe called time-energy waves. According to the equation $E = m \times (\Delta x)^2 / t^2$, these waves are distributed throughout the universe and work to maintain its internal balance. Since the universe is constantly changing—that is, constantly expanding—the difference between the two spacetime fabrics is also constantly changing. Therefore, these waves change and affect every region of the universe, influencing its nature, shape, and future. This is because the vast majority of time in the universe flows from the past to the future. This is due to the fact that the inverted spacetime fabric is larger than the normal spacetime fabric, resulting in the difference between the two fabrics that we see in the equation $E = m \times (\Delta x)^2 / t^2$. This difference attempts to maintain the universe's internal balance through the changes it induces, controlled by the difference between the normal and inverted spacetime fabrics.

When this difference increases to a critical point, immense spacetime tension is generated, similar to the rupture of a cosmic spring.

This tension opens enormous wormholes—which attempt to restore balance by bringing the two fabrics closer together.

Each wormhole is the universe's attempt to say the following: "The balance is broken; I will rebuild it." The universe is engaged in rebuilding itself, either internally or entirely. A force called the time force influences this renewal process. The principle of this force is that the closer the arrow of time is, the greater the repulsion. This means that the inverted spacetime fabric transitions from order to entropy. Similarly, the atom, or ordinary matter, transitions from order to entropy, causing the external inverted spacetime fabric to repel the atom. Here, we are talking about an atom, not a mass of atoms, as the situation is different. Thus, one atom of ordinary matter and another atom of another ordinary matter do not attract each other; rather, they repel each other. This is the basis of chemical bonds between atoms. A bond is a tool for bringing two atoms of ordinary matter closer together. For example, the Big Bang: a wormhole ruptured at the highest level of tension between the two fabrics.

According to this model, we will now move on to the complete renewal of the universe: The universe began from an astonishing crowding of wormholes that were trying to unify the two fabrics. But as the spacetime difference increased to an unbearable degree, these tunnels could no

longer withstand the tension, and they tore apart. This was especially true at the singularity, the point where the difference between the two spacetime fabrics was extremely high, resulting in a very, very large density of wormholes. This indicates that the difference between the two spacetime fabrics was enormous at that point.

At the tearing:

The universe is filled with photons, the remnants of those wormholes.

Ordinary matter became more stable than antimatter. This was due to the presence of an inverted spacetime fabric in a much larger quantity than ordinary spacetime fabric, and we find that the mass of the singularity was very, very small.

After the explosion of enormous energy from the wormholes, which transformed into wormhole remnants representing vibrations and energy quanta in the form of photons.

In this sense, the Big Bang is not a "birth," but rather a structural rearrangement of spacetime.

3. The Law of Universal Regeneration and an Analysis of its Basic Concepts and Derivatives

The law of universal renewal and an analysis of its fundamental concepts and derivatives. The foundation of this research rests on this law, which describes how temporal energy is generated, how the two fabrics of spacetime (normal and inverted) interact within the universe, and how time plays a role in this universe. It's worth noting that I mentioned this law, its definition, and its derivatives in my first research paper, "The Theory of Everything and the Law of the Universe." This law is formulated as follows:

$$\text{The Law of Time-Energy: } E\Box = m \times (\Delta x)^2 / t^2$$

$$\text{Time-energy (} E\Box \text{)} = \text{mass (} m \text{)} \times (\text{difference between inverted and normal spacetime})^2 \div \text{time}^2$$

This law doesn't merely describe a mathematical relationship; rather, it expresses a complete cosmic cycle that repeats with each renewal of the universe. Each renewal is faster than the previous one until we reach a certain point without an explosion, forming a triangle. At its base, the slowest renewal begins, then it gradually progresses to faster renewal, then faster, then faster, until we reach a point of no renewal. This is because with each renewal of the universe, the normal fabric of spacetime, responsible for gravity, decreases. The reversed spacetime fabric increases. Now we will begin to explain this law. This law describes our current universe and the matter within it.

Derivative 1: The Meaning of "Mass" in This Law

Mass is measured in kilograms. Here, mass is the center of gravity for the normal spacetime fabric. Every mass—large or small—attracts the lines of the normal spacetime fabric. If the mass is made of ordinary matter, it repels the reversed spacetime fabric according to the force-time principle I mentioned earlier. The greater the mass, the greater the pull of the normal spacetime fabric, and the approximate difference between the normal and reversed spacetime fabrics increases according to the law $E\Box = m \times (\Delta x)^2 / t^2$. Therefore, mass has become the general link between gravity and the time-time directions of the two fabrics. Here, mass is a "cosmic control center" that the universe uses to hold its fabric and reshape it.

Derivative 2: The Meaning of "Ordinary Spacetime Fabric"

It is a fabric that moves from entropy to order, or from the future to the past, or from numerous possibilities to very, very few possibilities, as mentioned previously, and stabilizes antimatter more than ordinary matter. It also dominates the gravitational field. The force of gravity is represented, and therefore we observe that the inverted spacetime fabric is always larger than the normal spacetime fabric in our current universe.

The Meaning of "Inverted Spacetime Fabric"

It is the fabric that moves from order to entropy, or from the past to the future, and acts to stabilize ordinary matter more than antimatter. It represents the other forces: the strong nuclear force, the electromagnetic force, and the weak nuclear force. Both spacetime fabrics are hypothetical entities, as I mentioned in my research, "The Theory of Everything and the Law of the Universe." The force of time, however, does not represent either of the two spacetime fabrics; it regulates the difference between them and is a central control center for the renewal of the universe, either internally or entirely.

The Meaning of "Difference Between the Two Fabrics" $(\Delta x)^2$

This is the most important element in the entire law. The difference between the two fabrics means the following: the extent of spacetime tension. The inverted spacetime fabric is larger than the normal spacetime fabric, and this is what creates the difference between the two fabrics. This difference tells us what stage the universe is in and what time the universe is in at this moment and within this difference.

It also tells us what the universe is like at this moment. We find that the difference between the two fabrics is a slightly variable difference, increasing and decreasing, but it generally tends towards increasing and towards cosmic expansion. This change, increasing and decreasing, is necessary because this slight change is what creates the variables present in the universe, such as the destruction of existing masses and the creation of new masses and the temporal energy waves that spread throughout the universe. The overall change towards increase is also necessary because it creates the universe's trajectory towards entropy and towards the future. The greater the difference, the greater the temporal energy, and the more wormholes work to unify the two fabrics of spacetime, and the process of renewal begins.

Derivative 3: The Meaning of "Time" (t^2)

Time here is not just a duration but a "direction." It represents the duration of the interaction between the two spacetime fabrics, or in other words, the time of transition from the normal fabric (which transitions from entropy to order) to the reversed spacetime fabric (which transitions from order to entropy).

We find that the time that existed at the beginning of the universe is extremely difficult to replicate because the universe at that time had the largest possible difference between the two spacetime fabrics at a specific point called the singularity. We must remember that this is the square of time, and with the completion of the law, $E = m \times (\Delta x)^2 / t^2$, the law becomes sensitive to any change in the transition speed between order and entropy.

Understanding this law allows us to see how the difference between the two fabrics can be exploited artificially. If we could create a large artificial difference—even on a very small scale—then we could produce high temporal energy and generate a large number of wormholes,

the rupture of which at a certain point would release a huge amount of photons. And generate spacetime vibrations and quanta in enormous quantities, just as happened at the beginning of the universe. This is the scientific basis of the spacetime engine, which we will explain in the following section.

4. The Spacetime Engine: The First Engineering Application of the Law of Cosmic Regeneration

$$E\Box = m \times (\Delta x)^2 / t^2$$

This law of time-energy not only describes the universe but can also be used to create a new kind of engineering: engineering based on controlling the two fabrics of spacetime and exploiting the difference between them to produce energy higher than anything humans have ever known. This is the foundation upon which the Spacetime Engine is built—the first physical engine to use the "difference between order and entropy" directly.

4.1 The Core Idea

Creating an extremely large artificial difference between the two fabrics to obtain extremely high time-energy in an extremely small space, just like what happened in the Big Bang, but on a smaller scale. The Spacetime Engine requires a highly excited atom and a highly low-energy atom inside a single chamber, in a very, very small space and under high energy, generating the greatest possible value of the "fabric difference," which is the inversion of the law $E\Box = m \times (\Delta x)^2 / t^2$.

4.2 How the Engine Works

(a) The inner chamber – the heart of the engine: This chamber contains two sections. First section: Cooling certain atoms to temperatures approaching absolute zero (Bose-Einstein condensate). Second section: Exciting other atoms to the highest known energy. When the two sections meet, the following occurs: this extreme contrast between the first and second sections creates a refraction in the local spacetime fabric, increasing the fabric difference in a way that nature itself can only achieve in stars. From this, wormholes are created in large numbers. If they are located at a small point, these wormholes will begin to crowd together at that point, and the "normal fabric" will begin to recede towards the "inverted" spacetime within the chamber. Then it explodes and tears apart into the remnants of those wormholes, which are photons in enormous quantities. The wormhole can be kept open by creating a difference between the two spacetime fabrics and allowing the regular, ordinary fabric to enter the wormhole. This is the fundamental spark.

(b) The point at which the greatest difference between the two spacetime fabrics is created, or the point at which the highest time-time energy is produced. When the difference between the two fabrics reaches a certain, controllable value, the engine begins to create miniature wormholes and quantum wormholes. The crowding and tearing of these wormholes at a specific point is what transforms the interaction of the two fabrics into a "drift force." A nuclear-powered cryo-cooled atomic freezing chamber (to reduce normal spacetime to its lowest state). As the base size increases, the engine's ability to create a greater difference between the two spacetimes increases... thus increasing speeds to levels that are difficult to describe.

4.3 Why Is This Engine Possible Today?

Because all its components exist separately: cooling chambers to absolute zero; accelerators capable of exciting atoms; magnetic field containment technology, making it either uniform or variable as needed; and quantum atomic sizing technology, which focuses excited and cooled atoms at a specific point where the difference between the two spacetimes is greatest. What we lack is the design that integrates these elements into a single arrangement, and this design comes directly from the law of time-energy.

4.4 The Spacetime Engine Is Not Science Fiction... But the Beginning of a New Era

When this engine operates, something unprecedented for humanity will occur. We will be able to control the difference between the two spacetimes instead of controlling the temperature or fuel. This is a revolutionary point that allows us to explore space at much faster speeds. This means speeds exceeding current speeds; the possibility of traveling between two points via a wormhole, achieved by making the difference between the two spacetime fabrics equal at two different locations so that the wormhole opening will then be equal for both ends, enabling instantaneous teleportation; the possibility of creating antimatter within isolated chambers, achieved by creating a Bose-Einstein condensate chamber with dynamic isolation, allowing for the generation of antimatter; and the possibility of generating enormous time-energy within spacetime itself. It is not just an engine... but the first human-made device to interact with the very foundation of existence.

5. The Most Striking Analogy: How the Universe Renews Itself as an Electron Jumps Between Energy Levels

The renewal of the universe is not a random event nor an explosion without a precursor. Rather, it is a controlled physical behavior that clearly resembles what happens to an electron during its ascent when it absorbs energy and jumps to a higher energy level. The process is different during the return phase; the electron releases energy to return to its lower energy level. However, the universe does not return; instead, it renews itself and is reborn.

First: The Electron as a Microcosm of the Universe

The electron only jumps to a higher energy level when the difference between the inverted spacetime fabric and the normal spacetime fabric around it increases due to an incoming photon. As previously explained, the photon is a remnant of wormholes. A speed photon equals the speed of a given set of wormholes. As the speed and number of wormholes (quantum wormholes) vary, so do the wavelength, frequency, and speed of light. Wormholes present the remnant of quantum wormholes. These wormholes increase the electron's energy by increasing the difference between the two spacetime fabrics. This increase raises the number of quantum wormholes within the electron, allowing it to transition from a lower energy level to a higher one. As the electron moves toward a higher orbit, it releases virtual objects due to its repulsion from the inverted spacetime fabric. These virtual objects create quantum wormholes that attempt to bring the two spacetime fabrics closer together at the electron's original location and the two fabrics at its destination. This creates an attractive force that pulls the electron toward the rupture point. When the electron reaches the rupture point of the wormhole, the emitted photon begins to form. The number of wormholes that rupture is determined by the energy and frequency of the photon that excited the electron. As the electron returns to its orbit, it releases the remnants of those wormholes from top to bottom; these remnants are the emitted photons. Since the electron is quantized and has a finite number of stable quantum wormholes, this is analogous to the universe

itself: the universe does not transition to a higher energy level and does not explode unless the difference between the two spacetime fabrics increases to a critical degree, causing the wormholes to rupture.

Second: The Universe's Analogy to the Electron in the Going Phase

The universe is currently in an expansion phase, meaning an increase in the number of wormholes, which precedes the next explosion. When the cosmic wormholes reach their limiting rupture, the universe explodes and renews itself, giving birth to a new universe. Each renewal of the universe is stronger and faster than the one before it, until the universe reaches a stage where it no longer renews itself. This process can be represented by a pyramid or a triangle, where each layer of renewal is larger than the one before it.

In the going phase, the electron and the universe are similar. Both undergo a process of wormhole rupture. However, in the return phase, they differ: the electron returns to its orbit, while the universe explodes and is reborn. This is not a metaphor... it is based on the law: $E = m \times (\Delta x)^2 / t^2$. This law describes time-energy as a fundamental law governing everything mentioned above.

Third: The Universe Acquires Its Energy Like the Electron, but on a Cosmic Scale

The question here is: Where does the universe get its energy from, just as the electron gets its energy from a photon? The answer: The universe captures its energy from the universe that preceded it, specifically from the inverted fabric of spacetime. Each renewal is faster than the previous one because the regular fabric of spacetime is being pulled towards the inverted fabric of spacetime.

As the universe acquires time-energy from the previous universe, the difference between the two fabrics of spacetime increases, cosmic tension increases, wormholes reach the point of rupture, and energy is released. Ordinary matter overcomes antimatter because the inverted spacetime fabric is larger than the normal spacetime fabric. The universe begins to form new ordinary matter due to the larger size of the inverted spacetime fabric compared to the normal one, the universe begins to expand at an accelerated rate, and over time, the tension reaches a critical value, preparing for the next Big Bang.

Fourth: The Relationship Between the Number of Wormholes and the Difference Between the Two Tissues

The greater the difference between the normal and inverted spacetime fabric, the number of wormholes in the universe is increasing, and the number of quantum wormholes inside the electron increases. All of them work to try to bring the two tissues closer together to achieve balance.

Fifth: What Happens Immediately After the Big Bang?

Following the moment of cosmic renewal, the following events occur precisely: the energy of the universe suddenly decreases due to the release of energy, and the normal spacetime fabric begins to increase; the difference between the two spacetime textures decreases; the universe is trying to regain its energy at an incredible speed due to the massive spread of the inverted spacetime fabric, which increases the difference between the two fabrics; the universe is working to form black holes that pull on the normal fabric of spacetime, increasing the difference even more, and the more black holes are formed, the more the expansion increases beyond normal.

6. The Universe Returns to Time Zero

In each cosmic cycle, the universe expands, and this expansion accelerates as if the electron itself were jumping between ever higher energy levels. But behind this expansion lies a single law that governs the entire scene: $E = m \times (\Delta x)^2 / t^2$. Time does not flow steadily but accelerates with each cosmic birth until it breaches the boundary of existence and the boundary of the inverted spacetime fabric.

So, when the universe is born, it emerges from a slow expansion, similar to an electron at a low energy level. With each transition to a new cycle, it becomes more energetically charged due to the significant difference between the two spacetime fabrics. This is because a large portion of the normal spacetime fabric is pulled towards the inverted spacetime fabric, thus increasing its size. Time itself becomes faster, and the density of events is higher.

This is not merely an analogy... it is a recurring structure that may exist on all levels: The electron jumps at specific levels, and perhaps the universe does the same on a larger cosmic scale. With each cycle, the rate of expansion increases, the rate of time change increases, and the interval between the beginning of one cycle and the next decreases. Until we reach the moment when the universe becomes so fast that the next cycle doesn't have enough time to form. At that point, the universe comes to a standstill. This is point zero. This is the point at which the accelerating cycles might reach their end. That is the moment when everything stops. Not because energy runs out, but because time itself reaches a limit beyond which existence can no longer function. There is a limit to existence.

7. Spacetime Structure, Wormholes, and the Instability of the Speed of Light

In this section of the research, we do not treat light as an entity moving within a static vacuum but rather as a medium representing virtual objects—this being one of the mediums of light. Nor do we treat the speed of light as an absolute constant independent of the structure of the universe. Instead, we reconsider the very path a photon takes within the fabric of spacetime. The fundamental idea here is quite simple, yet it represents a significant shift in our understanding.

The actual length traveled by a photon is not measured by the apparent distance but by the number of wormholes it traverses multiplied by the length of each wormhole. Therefore, the actual length of the path can be written as follows:

$$L(\text{actual}) = N \times d$$

Where (N) is the number of unstable wormholes the photon traverses. Wormholes in the universe are unstable due to the instability of the universe itself, which is accelerating and expanding. Consequently, their number varies. (d) is the actual internal length of each wormhole.

The total time of motion is the sum of the times of passage through these wormholes: $\Delta t = N \times \tau$. The speed is then: $V = L(\text{actual}) \div \Delta t = (N \times d) \div (N \times \tau) = d \div \tau$.

Herein lies the crucial point: the time of passage through a wormhole is indeed very, very small because the speed is extremely high. This speed does not depend on the number of wormholes, but rather on the properties of the wormhole itself. However, these properties are not constant in the universe, because, as we mentioned earlier, the universe is not static; it is constantly changing and accelerating. The speed of a photon also varies depending on the position of the wormhole within the spacetime structure. Because the wormhole approximates the difference between the

two spacetimes, and through the equation $C^2 = (\Delta x)^2 / t^2$ and the equation $v = d \div t$, and since the speed of the photon is equal to the speed of the wormhole, we deduce that (d) is the length traveled by the normal spacetime to reach the reversed spacetime. (t) can also be expressed as the time it takes the normal spacetime to transform into the reversed spacetime. It is not necessary for the speed of light to be an absolute constant, as I explained in my second research paper, "A Modification of Einstein's Relativity."

Based on the above, the speed of light is not necessarily a constant value, and I believe it is indeed not. Many experiments in the early universe support this, and even at the edges of the universe and at black holes, it is also supported. The speed of light is a value resulting from the length of the wormhole divided by the time it takes to traverse that region. And since the length of the wormhole changes with its position in spacetime, time also changes. Sometimes the speed of light remains constant, and other times it changes depending on the variation in length and time. Near black holes, where the regular fabric of spacetime is at its most uniform, the difference between the two fabrics decreases, and consequently, the length of the wormhole shortens, thus decreasing the speed of light.

However, in regions where the difference between the random, inverted fabric of spacetime and the regular, uniform fabric increases—such as in regions where the universe is expanding at tremendous speeds, like the edges of the universe—the length of the wormhole increases, and the resulting speed increases.

Wormholes as a Source of Energy: In principle, it is conceivable to extract energy from the regular and inverted fabrics of spacetime by destroying these wormholes. This would be achieved by maintaining their stability through a mechanism involving altering the difference between the two fabrics of spacetime to counteract the cosmic expansion. Once the wormholes are stable, we can destroy them and release their remnants, which will be in the form of photons. There is a cosmic laboratory that performs this function, operating within supermassive black holes that release enormous energy, much like quasars.

In this sense, light is not merely a carrier of energy within a vessel that allows it to do so. This vessel is the fabric of spacetime, where its speed results from the universe's own reorganization and self-renewal. The universe possesses a consciousness that organizes itself by choosing the shortest path, which is represented by wormholes. Thus, the wormhole becomes a dynamic, not a static, element, directly linked to the expansion of the universe, its internal organization, and the deep structure of spacetime. This perspective does not present the speed of light as a phenomenon independent of the universe, but rather as a direct consequence of the structure of spacetime and its internal interactions. It opens the door to a new understanding of speed, energy, and time as different manifestations of a single, profound process occurring within the fabric of the universe. The universe knows what it is doing.

8. Choosing the Shortest Quantum Path: From the Chloroplast to the Renewal of the Universe

Since the universe chooses the shortest path for its total renewal through its accelerating expansion, not its contraction, contraction would lead to eternity and indefiniteness, as it would repeat itself endlessly. However, the universe's accelerated expansion means that each time a cosmic renewal occurs, the universe chooses annihilation over permanence, with the vast

majority of matter being consumed, until it eventually reaches a triangular shape, as previously mentioned.

In this research, I would like to clarify that the selection of the shortest quantum path for light upon entering the chloroplast is not a strange process, but rather one governed by the laws of spacetime. This is the same principle the universe applies when choosing the shortest quantum path for energy, as energy is efficiently transferred within galaxies and throughout the universe.

When a photon enters the chloroplast, it has a high spacetime difference between the two fabrics, while proteins, which are large and complex, have a relatively small spacetime difference relative to light, according to the law. This leads to an increase in the overall difference between the light-dependent and protein-dependent pathways and, consequently, an increase in the number of quantum wormholes between them. The number of quantum wormholes increases to approximate the difference between the two spacetime variabilities. In other words, the pathway with the fewest quantum wormholes within the protein—that is, those connecting the protein's components—results in the formation of the greatest number of quantum wormholes between the protein and the light outside it. This large quantity of quantum wormholes causes light to be attracted to the protein. When light is attracted, the remnants of the quantum wormholes that connected them are also converted into photons, thus increasing the efficiency of the chloroplast.

The photon is attracted to proteins with higher mass, but this is not the decisive factor; other crucial factors include time-energy and time. The shorter the time it takes for normal tissue to transition to the protein's inverted spacetime, the smaller the difference between the two spacetimes of the protein, and the larger the overall difference between the protein and light. This leads to an increased number of quantum wormholes attempting to attract light without affecting its speed, thus allowing for highly efficient light transmission. This interaction directly reflects how energy in the universe chooses the most efficient paths by utilizing the shortest quantum route and quantum wormholes.

From this, we can conclude that what enables the chloroplast to do this is its living nature. The presence of a significant proportion of normal spacetime within it makes it alive, which reduces the difference between the two spacetimes within the chloroplast. This, in turn, increases the number of quantum wormholes, resulting in more efficient light attraction. As a highly organized and living system, this model resembles the living model of the universe: energy always chooses the path with the greatest difference between the two spacetimes, or the path with the smallest difference between them. This leads to the selection of the optimal quantum path, whether within the chloroplast or on a cosmic scale, and depends on the overall spacetime difference. This underscores that choosing the shortest quantum path for energy is a general rule governing the system at all levels, from the cell to the entire universe.

One final point for further understanding: migratory birds possess a substance that must be present in their beaks or eyes—that is, on their extremities. This substance functions at low temperatures, and its activity increases in cold air. It acts as a quantum system at low temperatures because increasing the normal spacetime fabric reduces the difference between the two spacetime fabrics, thus decreasing the time it takes for the normal spacetime fabric to transition to the reversed spacetime fabric and consequently increasing the duration of quantum entanglement. This substance is fundamental to avian migration, and this protein could be used or removed and a similar compound synthesized in the laboratory to usher in a new era of quantum mechanics operating within ordinary room conditions. It is likely that this protein,

present in the eye, serves to control migration; it is the language the bird uses to communicate with other birds during migration.

9. Conclusion: The Universe's Renewal from the Atom, Especially the Electron, to the Whole

In this research, we explored the universe's journey from the smallest energy levels in atoms to its greatest cosmic expansions and how the universe constantly renews itself.

We discovered that cosmic renewal is not merely a random explosion but a precise process dependent on the interaction between two spacetime fabrics: normal and inverted.

The difference between them generates wormholes and the temporal energy that drives the universe, just as it moves the electron between its energy levels.

We also witnessed numerous innovations through the law of the universe, $E = m \times (\Delta x)^2 / t^2$. We saw how this process resembles what happens in cells, especially in chloroplasts, where light takes the shortest quantum path, and quantum wormholes are generated, increasing energy efficiency, just as the universe does on a cosmic scale.

It became clear that life, whether inside the cell or within the universe, depends on the difference between these two fabrics for energy redistribution and organization. Entirely or internally.

As we have seen, wormholes play a crucial role in controlling energy flow, and the emergence of photons and the antimatter-making mechanism are natural consequences of the interaction between the two fabrics. We have also explored how this understanding can lead to the design of new spacetime engines or energy systems.

Ultimately, it becomes clear that the universe always chooses the most efficient path between the two fabrics at the galactic level, just as light always chooses the most efficient path between the two spacetime fabrics at the chloroplast level, for example. This law, $E = m \times (\Delta x)^2 / t^2$, governs the renewal of the universe, maintaining its triangular cycle until it reaches a point where the universe ceases to expand. The framework predicts that variations in the microstructure of spacetime near extreme gravitational environments may lead to measurable deviations in photon propagation and energy redistribution, providing a potential observational signature for the proposed model.

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Author Contributions

Mohamed Ibrahim El-Saeed Issa conceived the theoretical framework, developed the mathematical and physical model, performed the analysis, and wrote the manuscript.

References

First: Spacetime, Relativity, and the Structure of the Universe

Albert Einstein (1916). The Foundation of the General Theory of Relativity, Annalen der Physik. <https://einsteinpapers.press.princeton.edu/vol6-doc/>

Stephen Hawking & George Ellis (1973). The Large-Scale Structure of Space-Time. Cambridge University Press. <https://www.cambridge.org/core/books/large-scale-structure-of-spacetime/>

Sean Carroll (2004). Spacetime and Geometry: An Introduction to General Relativity. Addison-Wesley. <https://www.preposterousuniverse.com/grnotes/>

Second: Black Holes and Wormholes

Morris, Thorne (1988). Wormholes in Spacetime and Their Use for Interstellar Travel. Physical Review Letters. <https://journals.aps.org/prl/abstract/10.1103/PhysRevLett.61.1446>

Kip Thorne (1994). Black Holes and Time Warps. W. W. Norton & Company. <https://www.kipthorne.net/books/>

Leonard Susskind (2008). The Black Hole War. Little, Brown and Company. <https://www.hachettebookgroup.com/titles/leonard-susskind/the-black-hole-war/>

Third: The Photon, Quantum Paths, and the Concept of Shortest Paths

Richard Feynman (1948). Space-Time Approach to Quantum Mechanics. Reviews of Modern Physics. <https://journals.aps.org/rmp/abstract/10.1103/RevModPhys.20.367>

Feynman & Hibbs (1965). Quantum Mechanics and Path Integrals. McGraw-Hill. <https://authors.library.caltech.edu/110476/>

Paul Dirac (1933). The Lagrangian in Quantum Mechanics. Physikalische Zeitschrift der Sowjetunion. <https://royalsocietypublishing.org/>

Fourth: Photosynthesis, Chloroplasts, and Quantum Pathways

Engel et al. (2007). Evidence for Wavelike Energy Transfer Through Quantum Coherence in Photosynthetic Systems. Nature. <https://www.nature.com/articles/nature05678>

Graham Fleming & Gregory Scholes (2004). Quantum Mechanics for Plants. Nature. <https://www.nature.com/articles/431256a>

Van Grondelle & Novoderezhkin (2006). Energy Transfer in Photosynthesis. Physics Today. <https://physicstoday.scitation.org/>

Fifth: Time, Entropy, and the Arrow of Time

Ilya Prigogine (1980). From Being to Becoming: Time and Complexity in the Physical Sciences. W.H. Freeman. <https://link.springer.com/>

Huw Price (1996). Time's Arrow and Archimedes' Point. Oxford University Press. <https://global.oup.com/>

Carlo Rovelli (2018). The Order of Time. Riverhead Books. <https://www.carlorovelli.org/>

Sixth: Migration in Birds and Quantum Mechanics

Ritz et al. (2000). A Model for Photoreceptor-Based Magnetoreception in Birds. Biophysical Journal. <https://www.cell.com/biophysj/>

Thorsten Ritz (2004). The Magnetic Compass of Birds Is Based on a Radical Pair Mechanism in Nature. <https://www.nature.com/articles/nature02734>

European Molecular Biology Organization (EMBO). Quantum Effects in Biology. <https://www.embo.org/>

Seventh: Energy, the Accelerating Universe, and Dark Energy

Perlmutter et al. (1999). Measurements of Ω and Λ from 42 High-Redshift Supernovae. Astrophysical Journal. <https://iopscience.iop.org/>

Riess et al. (1998). Observational Evidence from Supernovae for an Accelerating Universe. Astronomical Journal. <https://iopscience.iop.org/>

Previous Works by Author

Issa, M. I. E. (2025). How the Universe Renews Itself: Temporal Energy, Spacetime Fabrics, and Quantum Wormholes. [Previous research: The Theory of Everything and the Law of the Universe; A Modification of Einstein's Relativity; How the Universe Speaks Through Consciousness.]



The Universe Speaks Through Consciousness

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Abstract

This research attempts to understand the profound relationship between the soul and consciousness through a new concept based on the fabrics of normal and inverted spacetime. The concept of normal and inverted spacetime is based on my other theories, the Theory of Everything and the Law of the Universe. In this research, I propose the idea that the soul is not consciousness, but rather that the soul is a normal spacetime fabric that moves from the future to the past and from a state of entropy to a state of order within cells. Therefore, living cells have less entropy. The scientist Schrödinger, one of the founders of quantum mechanics, confirmed this statement. Consciousness, on the other hand, is an inverted spacetime fabric that moves from the past to the future or from a state of order to a state of entropy. When these two fusions combine, they form the present moment. The present of man is different from the present of the planet and the present of the universe, but man's present is balanced with both.

Consciousness here is not a fixed thing, and the soul, which gives life, is not a fixed thing either. Therefore, man's present is volatile. Consciousness, which is an inverted spacetime fabric, moves toward entropy, generating a wave.

Probabilities overlap to form different ideas, such as electron probabilities.

When exerting great effort, such as exercising, the entropy in the body increases, which also increases awareness. The person feels that time slows down.

However, there is also the normal spacetime fabric that tends toward order, represented by the soul, which attempts to reduce entropy. The critical point is a finite difference between the two spacetime fabrics. This permissible dividing line between the two fabrics within the body maintains the balance

between life and death. When the energy is completely and significantly disrupted, the soul separates from the body, and death occurs.

This concept is linked to the law of the universe derived from my other theory, "The Theory of Everything." The law states:

$$E_t = m \times (\Delta x)^2 / t^2$$

This law states that energy in time equals the product of mass times the square of the difference between the two spacetime fabrics divided by the square of time. The energies that the environment provides to humans work to increase the inverted spacetime fabric, i.e., increase entropy, i.e., increase consciousness, i.e., increase thought.

This law represents the general framework for understanding the universe and the strange properties of quantum mechanics, as I mentioned in my other theory, an amendment to relativity, and how the universe speaks through consciousness, and how consciousness becomes a link between the soul and matter, and between humans and the universe.

1. Introduction

Mankind has reached an advanced stage of science and technology over the course of its long history, especially in the last century, and no one can deny this.

However, despite all this progress, it still stands helpless before the greatest mystery it has faced since its inception: What is consciousness? Some scientists call this problem the "consciousness dilemma."

It has often been said that consciousness is merely brain activity or that it is a neurochemical reflex. However, I say today that some of these explanations fall short of the truth because they fail to address the core of the matter. My theory also attempts to greatly expand upon the essence of consciousness and the essence of the soul.

In this research, I propose a new concept:

Consciousness is an inverted space-time fabric that overlaps and interacts with the normal space-time fabric.

As this inverted fabric increases, thoughts and effort increase. This inverted fabric leads to increased awareness. After awareness increases, the normal fabric, which transitions from entropy to order, attempts to counteract this effect, resulting in a feeling of well-being after fatigue.

Thoughts are a wave of probabilities that can interfere with each other, like electron waves. A simple example is that someone might observe a human being as an object, and when the observed person disappears, the observer has a wave of probabilities about where and when you are. The wave of probabilities collapses when one discovers the electron's presence.

This concept not only explains consciousness but also opens the way to a greater understanding: How does the universe itself speak through consciousness? How can the universe or planet Earth control us through its normal and inverted spacetime fabric? I will explain how to answer these questions in the following sections.

I have formulated this within the framework of my broader theory: The Theory of Everything, in which I established the universal law of existence.

The law, which I call the Law of the Universe, which I introduced in my other theory, The Theory of Everything and The Law of the Universe. This law, $E_t = m \times (\Delta x)^2 / t^2$, is the key to connecting energy, consciousness, and spirit. Through it, we can understand that consciousness is not a side effect of life. This consciousness is part of the universe, and the universe is part of it. If man were to get rid of consciousness, the universe would be rid of man.

2. The Theoretical Framework: The Ordinary and Inverse Spacetime Fabrics

The universe is not a silent void, as some have believed, but rather an interwoven fabric of spacetime. This fabric is not a single entity but rather has two basic forms:

2.1 The Ordinary Spacetime Fabric

It is responsible for the force of gravity, as I mentioned in my other theory, The Theory of Everything and The Law of the Universe.

It moves in a direction from the future to the past, i.e., from entropy (randomness) to order.

If we want to understand this fabric, we will understand it during sleep. It works to reduce the entropy of the body's cells. In general, it increases order and makes a person lose track of time

during sleep because it makes the person's perception of time pass faster. It acts like a partial and incomplete suppression of consciousness. As I mentioned earlier, a person's present is a product of the two space-time fabrics. This normal fabric can operate throughout dreams, meaning that you realize that a dream takes a long time, while in reality, a dream takes a short time. Dreams indicate the presence of thoughts and consciousness.

2.2 The Inverted Space-Time Fabric (Conscious)

This fabric reduces the effect of gravity, as I mentioned in my other theory. It moves in the opposite direction: from past to future, i.e., from order to entropy. This fabric is responsible for consciousness and thoughts, and it creates possibilities before they become reality.

The relationship between these two fabrics is one of constant push and pull.

When the inverted fabric increases and the normal fabric remains constant, it generates time energy, i.e., quanta of energy. It comes in the form of a wave of intertwined possibilities.

This temporal energy manifests within a person. Consciousness, then, appears in the form of thoughts. The intertwining of thoughts then transforms to generate feelings. Thus, consciousness becomes an inevitable result of the difference between the two fabrics.

It can be said, then, that a thought is nothing more than a "wave of possibilities" from the reversed fabric. When these waves interfere with other waves, new thoughts are generated. This interference creates feelings. Depending on the type of thought and the type of interference, entropy in the body may increase, leading to elevated cortisol levels, leading to high entropy in the body.

The greater the difference between the two tissues, or the greater the inverted spacetime fabric, the greater the probability wave, which increases thoughts, which increases feelings. Converging probabilities produce converging thoughts.

If we think through this and perform a computation, we can see that a thought, as a probability wave interfering with itself, can be 10 times faster than the mind currently is. However, we have not yet entered the regular spacetime fabric, which attempts to reduce the number of probabilities by monitoring the thought and making it clear.

3. Consciousness: The Hidden Language of the Universe

Consciousness is not simply electrical activity in the brain, as conventional science suggests. Consciousness is much more complex than that. It doesn't mean that I think, therefore I exist. There are many things that exist but don't think, and many things that think but have no apparent physical existence.

Consciousness is, in reality, an inverted spacetime fabric, moving in the opposite direction of the soul's time, to become the present moment we live in. If we want to travel into the past or future through consciousness, we can manipulate the difference between the two spacetime fabrics by speeding up or slowing down one relative to the other.

The inverted spacetime fabric is actually virtual objects of varying speed and density, but it resides within most of the body's muscle cells. It attempts to increase entropy in the body's cells. Since the inverted spacetime fabric overcomes the normal spacetime fabric due to the presence of normal spacetime within it, this makes the inverted tissue present within the normal tissue.

The inverted spacetime fabric makes a person feel as though time is slowing down during times of pain or extreme fatigue. This is because the difference between the two fabrics (normal and inverted) is so great, consciousness feels as though a minute has become an hour.

The opposite is true in sleep: the inverted fabric decreases, while the normal fabric increases, so we feel as though hours have passed as seconds. The mind and brain, which help create consciousness through neurons, their cohesion, and their rapid transmission of neural activity, help elevate the neuron to be the least entropic of all cell types, meaning it is more organized and more present in the normal space-time fabric. It must be this way, and it must be more organized than other cells, because if it were not, intense thought would lead to the separation of the body and the soul and death. Therefore, the cell must have a critical point, which, if completely disrupted, causes the two tissues to separate.

The surprise here is: Consciousness is not limited to humans.

All creatures have a degree of consciousness, but humans are endowed with the highest degree of it. Because his brain is full of regions with low entropy, which are the organized neurons found in the cerebral cortex, which increases the normal space-time fabric. This allows the mind or brain to help increase consciousness.

Even planets and galaxies have their own consciousness. The lower the entropy and the greater the organization process, the greater the consciousness process. This explains the secret of the connection between humans and the universe:

Consciousness is not individual; it is universal. Thoughts are quanta of energy resulting from the difference between the two spacetime fabrics. These quanta are transformed into thoughts. These thoughts interfere with each other like probabilistic waves, and the regular fabric works to reduce the scope of these probabilistic thoughts.

These probabilistic thoughts overlap.

Thus, we can say that humans are nothing but a mirror of the universe, reflecting the conflict between the two fabrics within themselves. Because humans were created from the universe, they were created based on the structure of the universe, its laws, and its rules.

4. The Soul Is the Secret to the Existence of Life in the Nature of the Universe

Apart from religious logic, the soul is an ordinary space-time fabric, meaning it is connected to the structure of the universe itself, and not a mysterious element, as some philosophers have claimed. The relationship between the soul and consciousness is not fixed but rather depends on the environment and circumstances.

The effects of the soul are most clearly evident during sleep, but consciousness does not disappear; rather, it is present, as evidenced by the dreams we experience. Most of us cannot recall what happened in the dream after waking up. This is because most of the thoughts present in dreams possess low energy. The body after death is in a state of complete entropy, a state of absolute disintegration of its internal order.

Thus, the essential difference between life and death is the presence of the soul within the body. It is this soul that maintains balance and order, while its absence leads to complete disintegration and a descent into chaos.

5. Soul and Consciousness

The present, which consists of the difference between soul and consciousness, is the basis of the time energy present in every living body.

Soul: A normal space-time fabric, moving from the future to the past. Its function is to reduce entropy and organize cells to become alive. For life to exist in a body, a soul is necessary.

Consciousness: A reversed spacetime fabric, moving from the past to the future.

Human life is a balance between the normal and reversed spacetime fabrics. There is a critical point, which is the permissible limit for both fabrics. Crossing it leads to death.

According to the law of the universe, $E_t = m \times (\Delta x)^2 / t^2$, the greater the mass. For example, comparing an elephant to an ant, the elephant's mass is much greater than the ant's, so the difference between the two spacetime fabrics decreases. In order to reduce this difference, there must be an increase in the normal fabric or a decrease in the reversed fabric.

Each body has its own present, its own consciousness, and its own soul. This is because each person's nervous system is not the same, and each person's body is not the same. This causes the energy quanta and the probabilistic waves that overlap to form thoughts to be different. The normal, regular fabric, i.e., Soul, is also different due to the difference in the nervous system. For this reason, ages must be different, and perceptions must be different, and the level of consciousness itself varies from person to person.

Interpretation of the Moment of Death

At the moment of death, entropy increases to its maximum, which increases consciousness to its maximum and leads to a complete disruption of the critical point. The body attempts to compensate for this deficiency by increasing the normal, regular spacetime fabric. However, the body fails because entropy and the reversed spacetime fabric exceed the critical point, leading to higher level of consciousness at the moment of death.

6. The Soul, Consciousness, and Cells That Help Us Exist in the Present Moment

Neurons are not just electrical pathways that transmit signals. They are areas where regular, normal tissue is concentrated, transitioning from entropy to order.

Therefore, we find that neurons, where normal tissue is concentrated, do not divide throughout life. This does not mean that there is no regular tissue throughout the body. It is not concentrated only in

the nerves, but rather, it is distributed throughout the body. It helps make the body a unified entity. When I say it changes, I mean the regular tissue that fills the entire body with nerve cells and other substances. It attempts to increase in order to resist and reduce external entropy. The soul, which is essentially a regular space-time tissue that moves from the future to the past, is concentrated in the neurons.

Earth, where the inverted fabric dominates the ordinary fabric, and the universe, where the inverted fabric dominates the ordinary fabric, force the direction of our time and our present to point toward the future. Muscle cells, in turn, require a soul, not to produce consciousness, but to generate organized movement.

Movement in living bodies is not merely mechanical contraction; otherwise, they would move randomly like unprogrammed machines. Rather, it reflects the harmony between the soul and the body. The soul works to adjust the difference between the two space-time fabrics, transforming potential energy into voluntary action.

If the number of neurons in the cerebral cortex increases to a greater degree than currently exists, and the duration of interaction between the two tissues decreases, and the degree of organization increases, humans will achieve levels of consciousness far higher than currently exist. This can enable them to compete with innovative artificial intelligence. The transformation of consciousness movement into voluntary action becomes even more refined.

This interaction demonstrates that consciousness is not a secondary phenomenon but rather a direct result of the presence of the soul within the body. When the soul leaves the body at the moment of death, and the distance between it and the body is very small, this indicates a large increase in the difference between the two tissues significantly.

7. The Universal Law Within the Cell

The nerve cell is not just a biological unit; it is a miniature cosmic laboratory. Like the stars located at the center of their clusters, they pull the regular tissue to concentrate within them, thus attracting objects toward them and controlling the movement of objects orbiting around them. Thus, the universal law applies:

$$E_t = m \times (\Delta x)^2 / t^2$$

In the case of stars located at the center of their clusters and black holes located at the center of the galaxy, they rely on their very large mass to reduce the square of the difference between the two spacetime fabrics. This difference only decreases with the increase of the regular spacetime fabric.

The mechanism of its operation in the universe works to pull the regular spacetime fabric by means of large masses so that the planets do not fall out of their orbits and the universe remains completely random. Within the neuron, the mass (m) represents the mass of the neuron: proteins, membranes, nuclei, and organelles.

When the soul present in the ordinary spacetime fabric supplies the neuron with systemic energy, it reduces the entropy of its components, creating an internal field that allows electrical charges to move quickly and harmoniously. This is the first condition for the emergence of consciousness in the cell.

The same applies to muscle cells, but in a different way: the soul grants them the ability to convert chemical energy into regular movement. Without the soul, muscle contraction becomes an uncoordinated mechanical tremor. Therefore, human life is a cosmic engineering based on the presence of the universal law within each cell, at every moment, in every state of order.

In this sense, it can be said that the universal law is not just a theoretical equation, but rather the mathematical framework that governs the relationship between the smallest thing in the universe and the largest thing in the universe. Every cell in the human body is merely a miniature version of the cosmos. It is for those who wish to learn more.

The Bose-Einstein Chamber Hypothesis and the Time-Regression of Consciousness

It is well known that a Bose-Einstein condensate (BEC) represents a state of matter that occurs at temperatures very close to absolute zero, where the particles lose most of their energy and enter a state of near-perfect order. In this state, the normal fabric that transitions from entropy to order dominates strongly.

In light of my theory of two spacetime fabrics, if we place a living organism inside a chamber under these conditions, while maintaining its life by providing it with a balanced temperature that prevents

its death, we would have created a highly orderly external environment that causes the conscious fabric to approach the critical point.

Upon reaching this limit, consciousness can partially separate itself from its usual temporal constraints, entering a time regression into the past. In other words, the body does not move, but rather the consciousness of the living being itself moves within a reverse time flow, as if entering a "vortex" of normal spacetime.

This hypothesis, which I call the "Bose-Einstein Time Regression Room Hypothesis of Consciousness," opens the door to a completely new vision: not time travel with the body, but rather allowing consciousness itself to travel in time by controlling the environment that balances the soul and consciousness.

In addition to this hypothesis, if we want to feel time as if it is faster, we must increase the random fabric on planet Earth. For example, by changing the Earth's speed, changing the Earth's speed will increase the inverse fabric, which makes time feel faster.

The Beginning of Human Life from the Normal and Reversed Space-Time Fabric

Human life begins from the interaction of two forms that are not identical in entropic nature: the sperm and the egg. Sperm are characterized by their movement being more entropic than the egg (i.e., more random). This is between the sperm and the egg, but between the sperm and other sperm, the sperm compete randomly.

The moment of fertilization is not merely a biological interaction, but rather a physical-spatiotemporal moment that allows for the generation of the first flash of temporal energy that expresses the fetus's present and life:

$$E_t = m \times (\Delta x)^2 / t^2$$

This time energy resulting from the interaction between the two space-time tissues is what allows the soul to enter the cell, and upon merging, the difference between the two space-time tissues of the sperm merges with the difference between the two space-time genes of the egg due to the merging of the genes.

So we can say that the true beginning of life does not lie only in the fusion of genetic material but in the creation of a new balance, which is the difference between the normal space-time fabric (the

soul) coming from regularity and the reversed space-time fabric (latent consciousness) coming from entropy.

It is this balance with the fusion of genes that determines from the first moment the nature of the future organism.

What distinguishes humans from other animals are the genes and the difference between the two space-time fabrics. The normal space-time tissue, which moves from entropy to order, is spread throughout the body, but it is concentrated in the cells that organize the body, such as nerves and heart muscle.

In the end, I would like to say that every living being is a creation of the universe.

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Author Contributions

Mohamed Ibrahim El-Saeed Issa conceived the theoretical framework, developed the mathematical and physical model, performed the analysis, and wrote the manuscript.

References

1. Penrose, R. (1994). *Shadows of the Mind: A Search for the Missing Science of Consciousness*. Oxford University Press.
2. Hameroff, S., & Penrose, R. (2014). Consciousness in the universe: A review of the 'Orch OR' theory. *Physics of Life Reviews*, 11(1), 39–78. <https://doi.org/10.1016/j.plrev.2013.08.002>
3. Hawking, S. W., & Ellis, G. F. R. (1973). *The Large-Scale Structure of Space-Time*. Cambridge University Press.
4. Prigogine, I. (1980). *From Being to Becoming: Time and Complexity in the Physical Sciences*. W. H. Freeman.
5. Rovelli, C. (2018). *The Order of Time*. Riverhead Books.
6. Kafatos, M., & Nadeau, R. (2000). *The Conscious Universe: Parts and Wholes in Physical Reality*. Springer.
7. Chalmers, D. J. (1996). *The Conscious Mind: In Search of a Fundamental Theory*. Oxford University Press.

8. Tegmark, M. (2014). Consciousness as a state of matter. *Chaos, Solitons & Fractals*, 76, 238–270. <https://doi.org/10.1016/j.chaos.2015.03.014>
9. Bohm, D. (1980). *Wholeness and the Implicate Order*. Routledge.
10. Wheeler, J. A. (1990). Information, physics, quantum: The search for links. In *Complexity, Entropy, and the Physics of Information*. Addison-Wesley.