LECTURE 34: THE LAST CULTURE WAR

SUMMARY

This is a work of science fiction. Set in 2056, it presents an MIT lecture from the final class of a course in which a professor discusses what history will purportedly call the "Second Breakthrough" - a transformation in how artificial intelligence enables moral reasoning and ethical discourse. While employing the tools of science fiction, this submission to the *Envisioning the Future of Computing* contest has a very serious purpose. As our society debates the merits and dangers of AI, we need new ways to imagine different social arrangements. Science fiction, at its best, serves not only as entertainment, but also as our culture's privileged vehicle for imagining genuine alternatives to the status quo.

The development of computing as imagined here draws on two distinct intellectual traditions. First, the submission invokes (albeit in whispers) moral philosophers who have examined the irreducible complexity of ethical reasoning. Their work subtly informs this paper's vision of AI systems that preserve normative richness. Current AI alignment approaches assume we can create safe AI through moral principles, behavioral learning, or utility functions. However, as the 2056 lecture argues, genuine moral reasoning will require capturing the full dimensionality of ethical decision-making while preserving cultural diversity and moral pluralism. This vision confronts several critical ethical challenges that emerge at the intersection of artificial intelligence and moral philosophy. The specter of "ethical lock-in" looms large - the risk that AI systems might inadvertently crystallize our current moral understanding into an immutable framework, becoming a barrier to progress rather than its catalyst. This connects to deeper concerns about algorithmic deference, where human decision-makers might increasingly default to AI recommendations rather than engage in genuine moral deliberation. The lecture also grapples with the tension between universal ethical principles and local moral frameworks, highlighting the risk of ethical imperialism as AI systems developed in one cultural context are deployed globally.

Second, this submission builds on what Raymond Williams termed the "structure of feeling" and also on Frederic Jameson's theory of science fiction's radical function. When Jameson argues in *Archaeologies of the Future* that science fiction helps us imagine genuine alternatives to present systems, he points to precisely the kind of exercise attempted here. For its part, Williams's structure of feeling - his concept for understanding social consciousness as it emerges, before it becomes formalized into fixed beliefs or institutions - is crucial for imagining how AI systems might engage with evolving moral intuitions. Just as Williams showed how literature captures emerging social values before they crystallize into doctrine, the Second Breakthrough's AI systems can map and work with ethical frameworks while they're still in development. This helps us envision AI systems that preserve rather than flatten ethical complexity. The shift from probability-based moral frameworks to possibility spaces that can detect and work with moral intuitions before they become rigid allows for genuine ethical pluralism and gestures (faintly if necessarily) toward what the professor terms "ethical recursion" and "moral cartography."

The convergence of machine learning, ethical pluralism, and human moral intuition suggests new ways to navigate moral complexity while preserving diverse worldviews. As current approaches to AI ethics show their limitations, we desperately need what Jameson calls "cognitive mapping" - ways to understand our constraints without falling into a despairing quiescence. This speculative history attempts such a mapping, showing how artificial and human intelligence might enable not just ethical decision-making but also genuine moral progress. The Second Breakthrough's resolution of cultural polarization through ethical pluralism demonstrates how technological innovation can preserve rather than diminish moral diversity.

The readers will note where actual research and speculative projection seamlessly interweave. This reflects both the paper's methodology and argument: genuine innovation requires rigorous analysis of present conditions and the capacity to imagine fundamental alternatives to existing systems. The word count is slightly less than 3,000; I attest that all of this work is my own, although I consider what is mine to equally belong to others.

Lecture 34: The Second Breakthrough and the Last Culture War

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MIT OpenCourseWare

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Course: 24.892J – Historical Perspectives on Digital Culture

Location: Stata Center, Room 32-123
Time: 14:00-15:30 EST

PROFESSOR JAMPF: ...a reminder that this lecture is being recorded for OpenCourseWare. Please use the microphones when asking questions...

[Inaudible]

...so today we will discuss what history calls the Second Breakthrough – or, as Doktor Schmidhuber termed it in his *Geschichte der Künstlichen Intelligenz*, "der Große Moralische Sprung" – a phrase that has taken on mythical proportions over the last 25 years.

But I'd like to begin with a quote that has acquired a particular resonance for me.

"For the moment, anyway, political philosophy is dead." That's from Peter Laslett. He wrote it in 1956.

Now, um, there's a delicious irony in these words.

You see, Laslett's declaration of philosophy's death was premature in 1956. But now, a century later, we can say with

scholarly certainty that philosophy - at least as Laslett would have recognized it - has indeed reached its conclusion. Not through the quiet irrelevance he envisioned, but through a transformation so complete it can only be called transcendence.

An observation to start... the great paradox of moral progress is how glacially it usually goes. Slow boring through hard wood, as Max Weber said. But occasionally you find moments of sudden acceleration. It's a punctuated equilibrium, to misuse the words of the paleontologist Gould, our former colleague at that college down the street.

[Laughter]

The Islamic Golden Age gave us the foundations of empiricism and religious tolerance. The Enlightenment crystallized concepts of individual rights that would have been alien to Plato or Augustine. Each of these transformations emerged from what we might call humanity's moral imagination – our peculiar ability to envision ethical frameworks radically different from our inherited ones. But it took centuries for the ideas of the Islamic Golden Age to permeate European thought and generations for Enlightenment concepts to reshape governance.

The arc of moral progress, as someone once said, is long (though I would argue it bends not toward justice, but toward increasing complexity, ja!).

Anyway, history's great moral innovators confronted the same sobering truth: transforming society's ethical framework is a task of monumental difficulty. Time has a way of compressing these struggles in our memory. John Locke, writing in the quiet of his study, could hardly have imagined his words would ignite a rebellion across an ocean he never crossed. Marx was long-dead before his scribblings in the British Museum found their first, imperfect expression.

And the price of moral progress, when is has occurred, has usually paid in blood. The American Revolution left wounds that would fester for generations. And the Soviet attempt to forge a

new moral order - well, the ruins of that particular utopia still cast long shadows.

But then, almost out of nowhere, came something unprecedented – what we now call the First Breakthrough. It began with the 1954 ruling by the Supreme Court in *Brown v. Board of Education.* That case lit a spark that ignited the Civil Rights movement, kindle the anti-war protests, and spread wildly through the then-emerging networks of mass media. For the first time, a moral revolution spread rapidly without force – only through the power of conscience and communication.

When Laslett pronounced political philosophy dead, 4% of Americans accepted interracial marriage. By the dawn of our century, that figure was 91%. This transformation wasn't achieved through violence – indeed, the only significant gunfire was aimed at the movement's prophets, Malcolm X and Dr. King. And their martyrdom only enhanced their message. What was new was not the ideas themselves but the speed of their transmission. Each participant in the movement became a node of change, each victory reinforced through the new communication channels of the postwar world.

This was a fundamental rewiring of humanity's moral circuitry, achieved through what we might call moral inception: the implantation and rapid spread of ethical ideas through newly democratized channels of communication. This was the First Breakthrough.

For all its achievements, the First Breakthrough left us with unfinished business. The 2020s brought what historians now recognize as a vicious culture war. We often forget - and I do know that you weren't even born then! - just how psychologically taxing it was to live through such polarization. Terrifying words like "cancellation" were thrown around promiscuously. Contemporary observers found themselves caught in what seemed like an intractable struggle between equally convinced sides. The polarization didn't just divide society; it actively impeded the search for truth itself.

Into this volatile mix came a series of seismic advances in artificial intelligence - Large Language Models, synthetic media, hyperconnected social networks - that seemed to exacerbate the problems. Communities' efforts to protect themselves inadvertently created precedents for mass surveillance. The growing power of the techno-elite sparked intense debates about wealth inequality. What few realized then was that these very technologies would eventually offer us a path toward what we now call the Second Breakthrough.

The Second Breakthrough first took root in an unexpected place: hospital ethics boards. These medical committees faced what computer scientists call a constrained optimization problem - how to fairly allocate a limited supply of donor organs to an overwhelming number of patients in need. Hospitals had long developed algorithms for identifying which patients would likely benefit most from transplants. But a series of influential papers in the 2020s revealed a troubling bias; these supposedly objective metrics systematically undervalued patients from lower socioeconomic backgrounds. The complexity of making truly equitable decisions seemed to exceed our human capacity to account for all relevant factors.

The Second Breakthrough emerged from a fundamental reimagining of governance in ethical decision-making. Memorial Sloan-Kettering and Mount Sinai pioneered the "AI-Human Ethics Partnership." Instead of reducing complex ethical decisions to mere numerical scores, the two health systems used AI to generate rich taxonomies of ethical precedent, drawing upon vast databases of historical cases, philosophical frameworks, and empirical outcomes. These were then evaluated by "ethical tribunals," carefully constructed panels comprising not just medical ethicists and clinicians, but also community advocates and people with experience of discrimination. Their genius lay in rejecting both techno-solutionism and human exceptionalism, creating instead a sophisticated dialectic of ethical reasoning.

Right here at MIT, in Building 46, just down the street from us, researchers led by Professor Sarah Chen-Hernandez took the hospitals' work and quickly mapped what they termed the "moral probability space" - a mathematical framework representing the

architecture of moral reasoning itself. Let me pause to explain precisely why Professor Chen-Hernandez's breakthrough was so revolutionary. You see, the AI systems of that era represented knowledge in what we called embedding spaces - vast multi-dimensional frameworks where semantic relationships were encoded geometrically. Her team made the crucial discovery that within these spaces, ethical reasoning created distinct, identifiable patterns. Much like how early language models could cluster words with similar meanings, but far more sophisticated.

Using techniques that would seem primitive to you now, they managed to isolate these ethical reasoning patterns from the broader embedding space. Think of it as... extracting a pure signal from background noise. This became the foundation for the moral probability space, a framework that captured and formalized ethical decision-making. The initial implementation was trained on the data from the existing medical board partnerships, learning to recognize patterns in how these committees weighed competing principles. But what made this truly remarkable was its generalizability. Once trained on medical ethics, the system could transfer this understanding to other domains with minimal additional training - something we'd seen in language models but never before in ethical reasoning systems.

This framework captured what philosophers had considered ineffable - the subtle gradations of human moral intuition.

The Second Breakthrough proved transformative across domains far removed from its medical origins. Environmental activist, criminal justice reformers, educational administrators - all discovered in this system not merely a decision-making tool, but what we might call an "ethical prosthetic," augmenting human moral reasoning in unprecedented ways. To achieve this, researchers developed a novel framework where ethical principles and legal precedents were encoded as vectors in a high-dimensional space. This allowed the AI to analyze the relationships between different ethical concepts and identify potential conflicts or inconsistencies.

The system also incorporated a sophisticated natural language processing module that could extract ethical arguments from legal texts, philosophical treatises, and even social media discussions. By combining these quantitative and qualitative analyses, the AI generated reports that highlighted the ethical dimensions of complex issues and offered potential solutions based on a nuanced understanding of moral reasoning. The system emphasized interpretability - its recommendations could be deconstructed, questioned, and refined, owing to the discrete nature of its embedding space. The ubiquity of the embedding space representation allowed for continued innovation in underlying intelligence while maintaining ethical. But perhaps most remarkably, the system exhibited what we now recognize as ethical recursion - with each new application, it refined not just its understanding of specific domains, but its fundamental grasp of ethical reasoning itself. We were, though we didn't fully grasp it at the time, witnessing the emergence of something unprecedented in human history: a genuine partnership between human moral intuition and machine-enabled ethical reasoning.

As with all transformative innovations, a number of complex challenges arose in its train. The success of the AI-Human Ethics Partnership began to alter the dynamics of ethical decision-making in ways both subtle and profound. Judges, initially enthusiastic about this new tool for achieving consistent justice, began to rely on it with what we now recognize as "algorithmic deference" - a tendency to default to the system's recommendations rather than engaging in the intended collaborative dialogue. More troubling still was the specter of what philosophers termed 'ethical lock-in' - the risk that this powerful system might inadvertently crystallize our current moral understanding, however flawed, into an immutable framework.

The tool we created to enhance moral reasoning became a crutch rather than a complement and atrophied our natural capacity for moral deliberation instead of strengthening it.

This tension manifested most acutely in what we now call the fragmentation period. Religious leaders and cultural authorities

began to identify a fundamental disconnect. The ethical principles embedded in the moral probability space often stood orthogonal to their own deeply held conceptions of justice and morality. In response, communities – Protestants, Catholics, Muslims, liberals, conservatives, to name a few - developed their own AI-driven moral frameworks, leading to an ideological fracturing of machine ethics. Internationally, governments, increasingly wary of what they perceived as ethical imperialism, started their own sovereign systems. We were witnessing, in effect, the balkanization of machine ethics, a development that threatened the universalist aspirations that had inspired the project in the first place.

Worse - and this is crucial - the "probability space" approach had fundamental limitations. Like all supervised learning systems of that era, it could only learn from the ethical decisions humans were already making. It couldn't help us discover new ways to resolve seemingly irreconcilable differences.

The resolution to this came from the private sector. A venture-backed startup called ManyWorld had initially set out merely to streamline the production of these customized ethical frameworks. Their methodology proved remarkably thorough. They began assembling what became the most comprehensive library of moral philosophy ever created, digitizing and analyzing ethical treatises from across cultures and centuries. They funded archaeological expeditions to uncover lost philosophical texts, collaborated with anthropologists to document oral ethical traditions, and worked with religious scholars to formalize centuries of theological reasoning. In short, they collected every idea of justice, virtue, and goodness ever put to paper or parchment or part of any oral or cultural tradition.

But unlike the elite AI startups of this time that had made similar investments in high quality training data, ManyWorld's approach represented something entirely different. Instead of using machine learning to find patterns in ethical decisions, they created a comprehensive moral knowledge graph. Their specialized natural language processing systems analyzed ethical texts and traditions, extracting not just principles and

conclusions, but the underlying logical structures and axioms. The key innovation - and this still astonishes me - was their system for mapping relationships between different moral frameworks.

Using graph theoretical approaches and causal inference methods, ManyWorld could identify shared foundational principles even when they were expressed in radically different ways. They could trace how different religious traditions, political ideologies, and cultural value systems often developed distinct ethical frameworks from common moral intuitions about human dignity and social harmony. The resulting “moral possibility space” wasn’t just another embedding - it was a dynamic, multi-dimensional representation of how ethical systems relate and evolve. Think of it like... well, imagine a map that shows not just where different moral frameworks are, but how they got there and what paths exist between them. Inside it all was, in essence, a mathematical representation of all possible ways to be good.

Make sense? Ok.

[Inaudible]

Yes, the implications of this discovery were profound. While the earlier probability space had sought to find the “right” answer to ethical questions, the possibility space revealed something far more subtle: that different ethical frameworks could be simultaneously valid yet seemingly contradictory.

More importantly, it showed that while ethical systems might appear irreconcilable when viewed in isolation, they were often connected through complex networks of shared underlying principles. The most advanced AI systems built on this approach could generate what we now know as “ethical pluralism protocols” - sophisticated frameworks that allowed different moral systems to interact productively without requiring either to compromise its fundamental values. This wasn’t mere tolerance or relativism; it was something entirely new, a mathematical architecture for maintaining ethical diversity while preventing destructive conflict. It gave us, for the first time, a rigorous way to understand how different moral frameworks could coexist

and even collaborate while maintaining their distinct identities. The tools don't make decisions for you, but they help illuminate the moral landscape you're traversing, revealing paths to resolution you might not have otherwise discovered. They've become, in essence, what the early developers called "moral cartography" - tools that map the territory of ethical reasoning without prescribing the route one must take.

I remember attending a conference in Singapore in 2031, where a prominent religious leader and a secular ethicist discovered, through these frameworks, that their opposing views on educational policy stemmed from the same fundamental concern for human flourishing. They had simply developed different vocabulary and different heuristics. This wasn't mere compromise or relativism; it was a genuine discovery of shared moral bedrock beneath seemingly incompatible surface structures.

I suppose what fascinates me most is how precisely the Second Breakthrough mirrored the transmission mechanisms of the First. We often focus on their different origins: one born on the streets of Montgomery, the other in the antiseptic corridors of a few hospitals. But, to me at least, this is largely an illusion. Their importance is in how they propagated through society. While previous revolutions required guns and guillotines, what I sometimes call the "hardware" of ethical change, the First Breakthrough operated by a much softer mechanism. Each lunch counter integrated, each peaceful protest staged, each conscience awakened became a node in an emerging moral network. The revolution spread not through force but through what the sociologists of that era rather clumsily termed "demonstration effects." When people saw dignity prevailing over hatred, it rewired our moral circuitry.

The Second Breakthrough followed an uncannily similar pattern. Oh, it began conveniently as we've seen, in ethics boards and around high-stakes negotiation tables, but its true significance emerged when it began operating through the same social mechanisms that characterized the First. Much as television cameras at Selma Bridge helped Americans see segregation through a new moral lens, the possibility space frameworks helped us see our cultural divides in a new light.

The success of the Second Breakthrough ultimately hinged on the insight that genuine moral progress requires both institutional scaffolding and organic social adoption. The computational power of AI gave us the ability to explore vast ethical spaces with unprecedented rigor, while the human governance structure ensured these explorations remained grounded in lived experience and cultural wisdom. But what truly distinguished this transformation was its capacity for ethical innovation while preserving moral diversity. Unlike previous moral revolutions that often sought to replace existing ethical frameworks with new ones, the Second Breakthrough gave us tools to build bridges between different moral worldviews while allowing each to maintain its integrity.

What the Second Breakthrough ultimately gave us wasn't consensus - it was something more valuable, a way to maintain our deepest convictions while engaging productively with those who see the world differently. The First Breakthrough had shown us that humanity's moral architecture could be fundamentally rewired through social means rather than force. The Second Breakthrough gave us the systematic tools to achieve this rewiring, not through coercion or shame, but through enhanced understanding of our shared moral foundations.

I'm often asked if I'm optimistic about our moral future. The honest answer is that I'm cautiously hopeful. The tools we've developed don't guarantee wisdom - they merely make it possible. Like any powerful technology, they can be misused or ignored. But they've given us something unprecedented in human history: a way to see the interconnectedness of our ethical systems while preserving their distinct identities. They've shown us that moral progress doesn't require uniformity - that perhaps the richness of human ethical thinking lies precisely in its diversity.

In my darker moments, I sometimes wonder if we deserved this gift. But then I remember that the First Breakthrough, too, must have seemed like an impossible blessing to those who lived

through it. Perhaps this is simply what progress looks like: not a steady march forward, but moments of extraordinary grace that, in retrospect, feel both miraculous and inevitable.

And with that, we bring this class to a close. It’s been an extraordinary journey. Please, um, review the case studies in Chapters 5 through 7...

[Applause]

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