GROVE CITY COLLEGE

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ARTICLES

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CONTENTS

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The editors strongly prefer articles under 15,000 words in length, the equivalent of 50 *Journal* pages, including text and footnotes. The *Journal* will not publish articles exceeding 20,000 words, the equivalent of 60 *Journal* pages, except in extraordinary circumstances.

To facilitate our anonymous review process, please confine your name, affiliation, biographical information, and acknowledgements to a separate cover page. Please include the manuscript's title on the first text page.

Please use footnotes rather than endnotes. All citations and formatting should conform to the 20th edition of *The Bluebook*.

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*The views expressed within these articles are those of the authors and do not necessarily reflect the policies or opinions of the *Journal*, its editors and staff, or Grove City College and its administration.

GROVE CITY COLLEGE

JOURNAL OF LAW & PUBLIC POLICY

2021-2022 Staff List

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GROVE CITY COLLEGE

Grove City College was founded in 1876 in Grove City, Pennsylvania. The College is dedicated to providing high quality liberal arts and professional education in a Christian environment at an affordable cost. Nationally accredited and globally acclaimed, Grove City College educates students through the advancement of free enterprise, civil and religious liberty, representative government, arts and letters, and science and technology. True to its founding, the College strives to develop young leaders in areas of intellect, morality, spirituality, and society through intellectual inquiry, extensive study of the humanities, and the ethical absolutes of the Ten Commandments, and Christ's moral teachings. The College advocates independence in higher education and actively demonstrates that conviction by exemplifying the American ideals of individual liberty and responsibility.

Since its inception, Grove City College has consistently been ranked among the best colleges and universities in the nation. Recent accolades include: The Princeton Review's "America's Best Value Colleges," Young America's Foundation "Top Conservative College," and U.S. News & World Report's "America's Best Colleges."

GROVE CITY COLLEGE JOURNAL OF LAW & PUBLIC POLICY

The *Grove City College Journal of Law & Public Policy* was organized in the fall of 2009 and is devoted to the academic discussion of law and public policy and the pursuit of scholarly research. Organized by co-founders James Van Eerden ’12, Kevin Hoffman ’11, and Steven Irwin ’12, the *Journal* was originally sponsored by the Grove City College Law Society. The unique, close-knit nature of the College’s community allows the *Journal* to feature the work of undergraduates, faculty, and alumni, together in one publication.

Nearly entirely student-managed, the *Journal* serves as an educational tool for undergraduate students to gain invaluable experience that will be helpful in graduate school and their future careers. The participation of alumni and faculty editors and the inclusion of alumni and faculty submissions add credence to the publication and allow for natural mentoring to take place. The *Journal* continues to impact educational communities around the country and can now be found in the law libraries of Akron University, Regent University, Duquesne University, the University of Pittsburgh, and Pennsylvania State University. The *Journal* has been featured by the Heritage Foundation and continues to be supported by a myriad of law schools, law firms, and think tanks around the nation.

PREFACE

Dear Reader,

It has been more than a decade since Volume 1, Number 1 of the Grove City College Journal of Law & Public Policy was first published in the Spring of 2010. During the intervening years, much has changed in the world, yet the Journal remains a vital source of scholarly research on law and policy.

The vision I shared in the Editor's Preface in the inaugural version of the Journal was to "expand distribution of the Journal to communities, businesses, law firms, colleges, and universities around the nation with the purpose of developing a national dialogue about important issues rooted in meaningful ideas." I knew the implementation of this vision would require the collective efforts of students, faculty, staff, and alumni – past, present, and future – who shared a vision for collegial debate and constructive dialogue. Thanks to the tireless efforts of many College stakeholders and co-creators, the vision for the Journal has mostly been realized: the publication can now be viewed in law libraries, law firms, and businesses around the country. Since the inaugural publication, the Journal has been distributed to tens of thousands of alumni, friends of the College, and other interested readers.

In the early days of founding the Journal, Steve Irwin, Kevin Hoffman and I were frequently asked about the specific purpose of the Journal within a campus community that already offered a newspaper, a literary magazine, and many other writing mediums. As young entrepreneurs pitching a new venture, we were pressed on the value proposition of this new publication.

We envisioned four distinct benefits the Journal would offer to the campus community and the College's sphere of influence:

1) it would provide students an opportunity to sharpen their critical thinking, legal writing, and editing skills

2) it would offer an opportunity for entrepreneurial activity, as the Journal would be a new publication requiring organizational processes, funding, marketing, etc.

3) it would enhance collaboration between students, faculty, and alumni in a way that was unprecedented at the time and 4) it would offer a forum for excellent scholarship – with a particular focus on classical liberalism - which would permeate beyond the boundaries

of the college campus into the larger marketplace of ideas.

I believe these distinctive features are equally applicable today as they were in 2010. I am excited to see the Journal grow and expand in future years on the bedrock of "Faith and Freedom."

I hope you enjoy reading this edition of the Journal!

James R.R. Van Eerden '12
Journal Co-Founder and Former Editor-in-Chief

FOREWORD

Dear Reader,

It has been an honor to work with this year's editorial team to present not one, but two volumes of the *Journal*. We faced the challenge this year of finishing an edition of the *Journal* which never made it to production last year, while at the same time going through the process of producing a new volume of the *Journal* for this year. In my opinion, this year's editorial team is one of the most dedicated and hardworking teams the *Journal* has ever had—the production of two volumes in one year is only possible because of their attention to detail and commitment to excellence. When faced with the task of producing and publishing two volumes, this team rose to the challenge with excellence and grace, and I could not be more grateful for their leadership and help in completing that challenge.

While a smaller edition, this Journal features three papers of unique scope and interest. The first paper, written by Natalie Pyron '25, analyzes the landmark Supreme Court case *Korematsu v. United States*. Pyron details the context of the case, the reasoning behind the ruling, and what impact the decision had when it was decided.

Following Pyron's article is an analysis of the case Students for *Fair Admissions v. President and Fellows of Harvard College* written by Josiah Montgomery '23. Montgomery shows each angle of both affirming and opposing arguments and lays out the importance of the decision for future cases the Court may hear.

The *Journal* concludes with an article by Susannah Barnes '21, former Administrative Editor of the *Journal*, who provides a fresh look at the concept of space property. Barnes presents both benefits of a private property system and includes economic thought throughout her analysis of the emerging public policy apropos space property.

I would like to thank our advisors Dr. Caleb Verbois and President Paul J. McNulty '80 for their dedication to the *Journal* and their help at every turn of the production process. I would also like to thank last year's editorial team

for leading in the process of selecting and editing articles for this volume of the *Journal*. Finally, I would like to thank our team of editors who have worked tirelessly amidst other responsibilities to complete the *Journal*, our donors who provide the *Journal* with funding, and the readers; without you, the continuation of this Journal would not be possible. We hope you find these articles to be both as enjoyable and intellectually stimulating as we have found them.

Eliz L. Slabaugh ‘23

Editor-in-Chief

THE SUPPRESSION OF LIFE AND LIBERTY

Natalie G. Pyron

ABSTRACT: *During wartime, the legal decisions imposed by the United States government often resulted in negative consequences for its citizens. Japanese internment during World War II serves as an example of the government's suppression of life and liberty during war. Fred Korematsu, an American citizen detained under wartime orders, appealed his detainment up to the Supreme Court of the United States. The Supreme Court determined in the 1944 case Korematsu v. United States that Korematsu's detainment was permissible. This essay argues that the Supreme Court's decision in Korematsu v. United States set a dangerous precedent and resulted in lasting damage to life and liberty.*

Whether intentionally or not, the American governnment has commonly implemented laws during wartime that harmed many citizens and in certain circumstances, such as in the case of Fred Korematsu, damaged specific cultures or people groups. The government often takes expedient action, which causes irreparable damage. One of the most recent and notable cases of impulsive wartime action was the Supreme Court's ruling in the 1944 case *Korematsu v. United States*. The decision justified the removal of Japanese people from the western United States and affirmed the constitutionality of the detainment centers in which the government imprisoned such individuals. The Fifth Amendment's due process clause guarantees a "due process of law" before the government may deprive an individual of his or her substantive rights of life, liberty, and property. Protecting citizens from government overreach, the clause secures the rights of the American people. During World War II, however, United States citizens of Japanese ancestry were deprived of due process when they were detained without hearings, trials, or court proceedings. Believing the internment order served to protect the American people, many Americans at the time expressed support for the government's actions. In later decades, however, the decision faced increased scrutiny. The American public should recognize *Korematsu v. United States* for what it truly was: an unlawful excuse to suppress the life and liberty of American citizens because of their national origins.

The attack on the Pearl Harbor Naval Base in Honolulu, Hawaii destroyed numerous military ships and supplies and left over two thousand people dead.[1] The aftermath galvanized the United States and led to the

1 Mark Loproto, *December 7, 1941: Pearl Harbor Casualties*, Pearl Harbor (Apr. 27, 2017), https://pearlharbor.org/losses-pearl-harbor/.

country declaring war on Japan. For many, though, war was not enough. Some started to believe the real enemy resided within the United States and not across the Pacific Ocean. Anti-Japanese sentiments increased throughout the country and calls arose for the removal of Japanese people from the West Coast. Westbrook Pegler, a renowned American journalist, expressed his views on this proposal by stating "the Japanese in California should be under armed guard to the last man and woman right now and to hell with habeas corpus until the danger is over."[2]

In response to the mounting pressure, President Roosevelt signed Executive Order 9066 on February 19, 1942, just two months after the attacks on Pearl Harbor. The order called for the removal of all persons residing in the West Coast who posed a threat to national security. Even though the order did not directly identify a particular target, the government used it to incarcerate both citizens and non-citizens of Japanese descent.[3] One month after the Executive Order was issued, the military released a new order that required "Japanese Americans along the West Coast to report to control stations and register the names of all family members."[4] The military and local authorities arrested those who obeyed the law and reported to the control stations. Many who did not immediately report to the stations were

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2 *Japanese American Incarceration*, Nat'l World War II Museum, https://www.nationalww2museum.org/war/articles/japanese-american-incarceration (last visited Aug. 4, 2020).

3 *Japanese-American Internment: Three Key Questions*, Franklin D. Roosevelt Presidential Library https://www.fdrlibrary.org/curriculum-guide-internment (follow "Three Key Questions" hyperlink) (last visited Jul. 26, 2020).

4 *Japanese American Internment*, Encyclopedia Britannica, https://www.britannica.com/event/Japanese-American-internment (last modified Oct. 18, 2021).

discovered and moved to detainment camps. Soon the government arrested over 120,000 people without a hearing or a trial. Of all the Japanese people incarcerated, seventy percent were American citizens.[5]

Although most Japanese Americans chose to comply with the internment order, some decided to ignore Executive Order 9066 and continue living on the West Coast. Fred T. Korematsu was one American citizen who risked arrest and prosecution by defying the order. Unwilling to turn himself in, he attempted to hide his identity by altering his appearance: "He underwent minor plastic surgery to alter his eyes in an attempt to look less Japanese. He also changed his name to Clyde Sarah and claimed to be of Spanish and Hawaiian descent."[6] Despite Korematsu's avid determination to continue living as an American citizen, authorities discovered and arrested him in San Leonardo, California on May 30, 1942.

Four months later, a federal court tried and convicted Korematsu for breaking a public law that made it illegal to ignore military orders issued under Executive Order 9066. With the assistance of the American Civil Liberties Union, Korematsu took his case to the U.S. Court of Appeals, which upheld the decision of the lower courts. He then appealed to the Supreme Court of the United States,[7] but

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5 John Lee, *Japanese Incarceration-Executive Order 9066 (1942)*, Dartmouth College, https://www.dartmouth.edu/~hist32/History/History.htm (follow "20th Century" hyperlink; then scroll to the year "1942"; follow "Japanese Incarceration - Executive Order 9066 (1942)" hyperlink), (last visited Jul. 23, 2020).

6 *Fred Korematsu's Story,* Fred T. Korematsu Institute, http://www.korematsuinstitute.org/fred-t-korematsu-lifetime (last visited Mar. 29, 2022)

7 David Margolick, *Legal Legend Urges Victims to Speak Out*, N.Y Times, (Nov. 24, 1984), https://www.nytimes.com/1984/11/24/nyregion/legal-legend-urges-victims-to-speak-out.html.

the case was not decided until December 18, 1994. Nearly all the presiding justices viewed the case with reservations. Associate Justice Hugo Black, who authored the opinion of the court, wrote, "it should be noted, to begin with, that all legal restrictions which curtail the civil rights of a single racial group are immediately suspect. That is not to say that all such restrictions are unconstitutional."[8] Even though the Court expressed skepticism concerning the violation of civil liberty, Korematsu lost after the Court issued a 6-3 decision in favor of the government.

The Court concluded that the justification for Executive Order 9066 rested on the "imminent danger" that Japanese Americans posed to the country. Associate Justice Felix Frankfurter concluded that Japanese internment was warranted because of "martial necessity arising from the danger of espionage and sabotage."[9] In addition to supporting preemptive military action, Justice Black stated, "Korematsu was not excluded from the Military Area because of hostility to him or his race."[10]

All three of the dissenting justices, however, agreed that the government targeted Korematsu because of his Japanese ancestry. Justice Frank Murphy found that the Court's decision exceeded "the very brink of constitutional power and fallen into the ugly abyss of racism."[11] Justice Robert Jackson wrote that Korematsu's crime consisted of "merely being present in the state whereof he is a citizen, near the place he was born, and where all his life he has

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8 Korematsu v. United States, 323 U.S. 214, 216 (1944).
9 *Id.* at 225.
10 *Id.* at 223.
11 *Id*. at 233 (Justice Murphy dissenting).

lived."[12] While Justice Jackson argued that the detainment of Japanese Americans was a constitutional violation of the Equal Protection Clause of the Fourteenth Amendment, Justice Owen Roberts addressed the issue of military necessity: "Individuals must not be left impoverished of their constitutional rights on a plea of military necessity that has neither substance nor support."[13] After losing his last appeal, Korematsu returned to the Central Utah War Relocation Center where he was detained in a horse stall with a single lightbulb. Later he admitted that "jail had been better than this."[14]

Following the end of World War II and the closing of the internment camps, Fred Korematsu sought restitution for the injustices he suffered. He would have to wait for several decades. In 1976, the Executive Branch signed a proclamation that discontinued Executive Order 9066. President Gerald Ford issued a formal apology for the internment of Japanese people and acknowledged the sacrifices of Japanese Americans. He explained that,

> We now know what we should have known then—not only was that evacuation wrong but Japanese Americans were and are loyal Americans. On the battlefield and at home the names of Japanese Americans have been and continue to be written in history for the sacrifices and the contributions they have made to the well-being and to the security of this, our common Nation.[15]

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12 *Id*. at 243.

13 Tony Mauro, The Supreme Court: 20 Cases That Changed America (2016).

14 Steven A. Chin, When Justice Failed: The Fred Korematsu Story (1992).

15 Gerald Ford, *President Gerald R. Ford's Remarks Upon Signing a Proclamation Concerning Japanese-American Internment*

President Jimmy Carter created a committee to investigate the detainment of Japanese Americans in World War II. The committee placed the blame for detainment on "race prejudice, war hysteria, and a failure of political leadership."[16] President Ronald Reagan later signed the Civil Liberties Act of 1988, which granted reparations to surviving prisoners. A decade later, President Bill Clinton awarded Fred Korematsu with the Presidential Medal of Freedom, declaring, "In the long history of our country's constant search for justice, some names of ordinary citizens stand for millions of souls Plessy, Brown, Parks...to that distinguished list, today we add the name of Fred Korematsu."[17]

Judge Marilyn Hall Patel nullified Fred Korematsu's conviction in the fall of 1983. In his hearing before the United States District Court in San Francisco, Korematsu requested that "the government admit that they were wrong and do something about it so this will never happen again to any American citizen of any race, creed, or color."[18] Although the courts had cleared him of criminal action, he still sought the official overturning of his case. Fred Korematsu never living to witness what he believed to be the final restitution for the injustices he and others had endured, though, as he passed away in 2005.[19]

During World War II, Ford Library and Museum https://www.fordlibrarymuseum.gov/library/speeches/760111.htm (last visited Mar. 3, 2022).

16 Timothy P. Maga, *Ronald Reagan and Redress for Japanese-American Internment*, Presidential Studies Quarterly, 1998, at 608.

17 Akil Vohra, *Honoring Fred Korematsu Obama White House*, The White House, (February 1st, 2011) https://obamawhitehouse.archives.gov/blog/2011/02/01/honoring-fred-korematsu.

18 Chin, *supra* note 14.

19 *Fred Korematsu's Story,* Fred T. Korematsu Institute, http://www.korematsuinstitute.org/fred-t-korematsu-lifetime (last visited Mar. 29, 2022).

Even after World War II, the United States Supreme Court had not paused to rethink or revisit the constitutionality of Japanese internment camps. The Fifth Amendment guarantees due process for citizens before detainment, yet the Supreme Court not only ignored this, but they also cited Korematsu for support in other rulings. Dean M. Hashimoto, professor of law at Harvard University, commented on the Supreme Court's response, stating "Korematsu's continued vibrancy should not be blamed on the Court's lack of opportunity to diminish or overrule it. The Court has had repeated opportunities to do so, but has instead cited Korematsu for support."[20]

In *Bolling v. Sharpe*, a 1954 decision that banned segregated public schools in the District of Columbia, Chief Justice Earl Warren rephrased the Court's opinion on racial classification in *Korematsu v. United States*, writing that "classifications based solely upon race must be scrutinized with particular care, since they are contrary to our traditions and hence constitutionally suspect."[21] Though laws that disproportionately affect racial minorities were declared "constitutionally suspect," the Court dismissed an opportunity to review and overturn *Korematsu v. United States*. The justice system bypassed another chance to reverse the decision in the 1995 case *Adarand Constructors, Inc. v. Pena* when the Court imposed a strict scrutiny standard on all cases pertaining to racial classification.[22] Such cases in the past were decided by using a standard of intermediate scrutiny; the Court justified the sudden switch from intermediate scrutiny to strict scrutiny by citing *Korematsu*

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20 Dean H. Hashimoto, *The Legacy of Korematsu v. United States: A Dangerous Narrative Retold*, B.C. Law School, (January 1996).

21 Bolling v. Sharpe, 347, U.S. 497 (1954).

22 Girardeau Spann, A Race Against the Court: The Supreme Court and Minorities in Contemporary America, 1994.

v. United States as support.

Two decades later, in 2018, the Supreme Court decided to overturn *Korematsu v. United States*. Justice Sonia Sotomayor mentioned the case in her dissent in the 2018 case *Trump v. Hawaii*, claiming that the older case possessed "stark parallels" to the current case. Arguing that in *Korematsu*, the Court gave 'a pass [to] an odious, gravely injurious racial classification'" authorized by an executive order, Sotomayor concluded that "as here, the Government invoked an ill-defined national security threat to justify an exclusionary policy of sweeping proportion."[23]

Chief Justice John Roberts, who wrote the majority opinion, disagreed with Sotomayor's assessment, stating:

> Finally, the dissent invokes *Korematsu v. United States*…Whatever rhetorical advantage the dissent may see in doing so, Korematsu has nothing to do with this case. The forcible relocation of U. S. citizens to concentration camps, solely and explicitly on the basis of race, is objectively unlawful and outside the scope of Presidential authority. But it is wholly inapt to liken that morally repugnant order to a facially neutral policy denying certain foreign nationals the privilege of admission.[24]

He decided, however, that the reversal of *Korematsu v. United States* was long overdue. He wrote, "The dissent's reference to Korematsu…affords this Court the opportunity to make express what is already obvious: Korematsu was gravely wrong the day it was decided, has been overruled in the court of history, and—to be clear—'has no place in law under the Constitution.'"[25]

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23 *Trump v. Hawaii*, 585 U.S. (2018).

24 *Id.*

25 Charlie Savage, *Korematsu, Notorious Supreme Court Ruling on Japanese Internment, Is Finally Tossed Out*, N.Y. Times, 26 June 2018

While the present government appears to view the ruling in *Korematsu v. United States* as unjust, a chance may exist for such wrongdoing to occur once again. In response to a question posed by a student at the University of Hawaii School of Law, Justice Antonin Scalia addressed the 1944 case, "Well, of course, Korematsu was wrong…but you are kidding yourself if you think the same thing will not happen again…. It was wrong, but I would not be surprised to see it happen again, in time of war. It's no justification, but it is the reality."[26] The government and the courts are correct in their censure of *Korematsu v. United States*. The recognition of wrongdoing, however, may not be enough to prevent the future incarceration of a people group during times of conflict. Only if America learns the civil dangers of placing innocent American citizens in prison will it prevent the same mistake when facing similar circumstances.

The legacy of *Korematsu v. United States* highlights the individual freedom all American citizens possess, not because the government permits it, but because all people are created equal. Professor Hashimoto advises that "Korematsu's persistence, as legal precedent and as a memory of the internment itself, must serve to remind us to be vigilant in protecting our civil liberties."[27] The American government and the American people must remember to preserve the freedom of all citizens. *Korematsu v. United States* must stand as a warning against encroaching wartime government so that life and liberty will not be suppressed during times of conflict.

(last visited Mar. 29, 2022), https://www.nytimes.com/2018/06/26/us/korematsu-supreme-court-ruling.html

26 Audrey McAvoy, *Internments Can Happen Again, Scalia Warns*, Star Advisor, (last visited Mar. 29, 2022) https://www.staradvertiser.com/2014/02/04/hawaii-news/Internments-can-happen-again-Scalia-warns/.

27 Hashimoto, *supra* note 20.

STUDENTS FOR FAIR ADMISSIONS V. PRESIDENT AND FELLOWS OF HARVARD COLLEGE: A CASE BRIEF

Josiah A. Montgomery '23

ABSTRACT: *Since Duncan v. Louisiana in 1968, the courts have interpreted the text of the Fourteenth Amendment to assert a single form of due process that all lower courts and state courts must follow. Prior to that case, the amendment was interpreted to mean that states could determine the rights of their citizens as well as by what process those rights could be stripped. The federal government only had authority to intervene when a state violated its own due process procedures for one of their own citizens. This paper will examine how, when reinterpreting the amendment, the Supreme Court assumed the authority to not only prescribe a single form of due process to which all states must abide, but also to determine which rights must be protected by that form. Further, this paper will assert that such assumption of judicial power following the reinterpretation of the text grants the judicial branch more legislative abilities than originally intended by the founders.*

In 2014, the nonprofit organization Students for Fair Admissions (SFFA) sued Harvard University based on the university violating Title VI of the Civil Rights Act of 1964 and the Fourteenth Amendment. SFFA claimed Harvard violated Title VI by discriminating against Asian-American students in their admissions department in favor of less accomplished students who fit categories of other racial minorities. The alleged discrimination is linked to elements of affirmative action, which has waxed and waned in public colleges since the 1970s.

Although the University of Harvard is a private institution, it still collects federal funding, meaning the university is subject to federal regulations and laws. The Civil Rights Act of 1964 outlaws racial discrimination and affects everything within the public sector, such as voting and education. Title VI of the act declares, "No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance."[1] The title also states, "Any department or agency action taken pursuant to section 602 shall be subject to such judicial review as may otherwise be provided by law for similar action taken by such department or agency on other grounds."[2] Under these parameters, the federal judiciary system must uphold standards compliant with the 1964 act.

The plaintiffs for SFFA claimed Harvard engaged in a "soft racial quota," which keeps an equal but limited representation for minorities without formally enacting the quota.[3] According to the plaintiffs, these quotas violate both

1 601. *Civil Rights Act of 1964*, U.S.C 8 (1964), § 2000e.

2 603. *Civil Rights Act of 1964*.

3 Hua Hsu, "The Rise and Fall of Affirmative Action," *The New Yorker*, October 15, 2018.

Title VI and the Fourteenth Amendment's Equal Protection Clause. The number of Asian-Americans admitted to Harvard consistently remains low despite an increase in applicants.[4] The 1978 Supreme Court case *Regents of the University of California v. Bakke,* deemed racial quotas illegal. In this case, the court generally left most policies of affirmative action ambiguous but struck down racial quotas as they violated the Equal Protection Clause of the Fourteenth Amendment. Powell noted that although encouraging diversity amongst collegiate institutions is noble, he ruled that "petitioner's special admissions program, which forecloses consideration to persons like respondent, is unnecessary to the achievement of this compelling goal, and therefore invalid under the Equal Protection Clause."[5]

In the case, Powell employs "strict scrutiny," which first arose during the New Deal court in the case *United States v. Carolene Products*. A greater level of scrutiny must be employed if a federal law or action under federal jurisdiction, such as public university affairs, violates one of three essential tenets: violations against the US Constitution, restrictions on the political process for citizens, or discriminations against vulnerable minorities who cannot redress the violation on their own.[6] The implementation of strict scrutiny alongside the "rational basis test" became essential standards for interpreting the law throughout the twentieth-century. In *Bakke*, Powell writes that in order for an institution's affirmative action programs to pass strict scrutiny, the pursued diversity that "furthers a compelling state interest encompasses a far broader array of qualifications and characteristics, of which racial or ethnic origin is but a

4 *Id.*

5 *Regents of University of California v. Bakke*, 438 U.S. 265 (1978),

6 *United States v. Carolene Products Co.*, 304 U.S. 144 (1938).

single, though important, element."[7] Although the Supreme Court later altered the standard of passing strict scrutiny regarding affirmative action, Powell's initial use laid the foundation. Many future cases regarding affirmative action employed these standards including the SFFA's lawsuit against Harvard.

While later cases, such as *Grutter v. Bollinger* (2003) and *Fisher v. University of Texas* (2016), mostly reaffirmed the decision in *Bakke*, they still left the solution to affirmative action ambiguous. In *Grutter*, Justice O'Connor's majority opinion permitted the use of race a factor in the college admissions process, but it maintains that it must be narrowly tailored.[8] The decision in *Fisher v. University of Texas* (2013), also known as *Fisher I*, even held that the only solution for promoting diversity is to maintain race-based policies in the college's admission process.[9] SFFA's lawsuit against Harvard, eventually becoming *Students for Fair Admissions v. President and Fellows of Harvard College*, reached the United States District Court for the District of Massachusetts in late 2018. The district court paused on ruling on the case until the Supreme Court ruled on *Fisher II*, which, in many ways, the Supreme Court provided the guidelines for how the Massachusetts District Court later ruled.

Judge Allison D. Burroughs ruled in October 2019 that Harvard had acted accordingly with the standard of affirmative action as laid down by the Supreme Court. According to the judicial decision in *Fisher II*, which Burroughs used heavily when deciding, in order to be legal, Harvard's affirmative action policies could not possess race quotas, adhere to the Fourteenth Amendment, pass the strict scrutiny test, and be narrowly tailored in a way to garner the

7 *Regents of University of California v. Bakke*.
8 *Grutter v. Bollinger*, 539 U.S. 306 (2003).
9 *Fisher v. University of Texas*, 570 U.S. 297 (2013).

benefits from a diverse student body without discriminating against other minority students.[10] After considering all these parameters, Judge Burroughs ruled that Harvard did not violate the Supreme Court's precedents or any federal statutes. She stated that although Harvard's admissions office shows many glaring problem, it passed the test of strict scrutiny and every other parameter tied to it.

To pass strict scrutiny, Burroughs tested Harvard's admissions to examine if they are narrowly tailored and possess a compelling interest regarding the consideration of an applicant's race. She claimed the admissions process is indeed narrowly tailored for a few reasons. The most essential element of being narrowly tailored is the required absence of a quota system. According to Burroughs, "the Court sees no evidence of discrimination in the personal ratings save for the slight numerical disparity itself."[11] Other than a few odds and ends, the court found no clear existence of a quota system. To justify Harvard's purpose for its consideration of race in admissions, Burroughs also discovered the compelling interest tied to the greater United States. To ignore students based on race, she argued, would strip minority students of their identity, and ultimately withhold diversity from the institution altogether. She wrote, "the rich diversity at Harvard and other colleges and universities and the benefits that flow from that diversity will foster the tolerance, acceptance and understanding that will ultimately make race conscious admissions obsolete."[12] The diversity itself serves to encourage more diversity and cultural understanding

10 *Fisher v. University of Texas at Austin*, 579 U.S. 631 (2016).

11 *Students for Fair Admissions v. President and Fellows of Harvard College*, U.S. District Court of Massachusetts, Civil Action No. 14-cv-14176-ADB (2019).

12 *Students for Fair Admission v. President and Fellows of Harvard College*.

amongst the young students of Harvard, thus leading them to better know those different from themselves. The promotion of diversity eventually leads to better behavior towards one another and eliminate racism and prejudice altogether. This end justifies the compelling interest of the United States, and rather than violate the Fourteenth Amendment and Title VI, it supports both of the statutes. With all these thoughts considered, Burroughs found no illegitimacy or infringement of the law from Harvard's admissions office.

Although ending racism in the United States is a noble good, it should not come at the expense of others. Greater understanding of other racial groups is essential to fulfilling this goal, but the rejection of Asian applicants based on keeping an equally diverse campus rejects the aims of both the Fourteenth Amendment and Title VI, despite Burroughs best attempts to argue the opposite. Many Constitution aspirationalists only wish to attain a better future that provides equal liberty for all citizens without considering those who become marginalized in the present; this school of thought, however, prioritizes ruling in line with what they think society wants, not necessarily what is correct.

This sense of legal pragmatism first emerged under Justice Oliver Wendell Holmes who laid the framework for what became strict scrutiny.[13] Burroughs ruling, however, largely violates strict scrutiny as it goes against one of its essential tenets, that of protecting minorities from injustices. A similar injustice against Asian-Americans occurred during the New Deal Court. The Supreme Court upheld internment camps for citizens of Japanese ancestry in *Korematsu v. United States*.[14] With such a high volume of contradiction and indecisiveness, the American judicial system needs

13 Oliver Wendell Holmes, *The Path of the Law*, HARVARD LAW REVIEW 110, no. 5 (1897): 992.

14 *Korematsu v. United States*, 323 U.S. 214 (1944).

to reevaluate the questions asked in *Students for Fair Admissions v. President and Fellows of Harvard College* in order to be sure they are properly answered.

SFFA filed an appeal to the First Circuit Court of Appeals, and while it upheld Burroughs's ruling, the final decision is not set in stone. In December of 2021, the SFFA was in the process of bringing the case to the Supreme Court. President Biden urged the Supreme Court to reject the case and to not bring up the racial question in the college admissions.[15] Despite President Biden's best wishes, the court did the exact opposite. On January 24th, 2022, the Supreme Court agreed to hear both *Students for Fair Admissions v. President and Fellows of Harvard College* and the similar case *Students for Fair Admissions v. University of North Carolina* during the next term.[16] With the Supreme Court holding a much more conservative alignment than in previous years, the dual case may potentially overturn or redesign affirmative action in the college admissions process.

15 Nate Raymond, *Biden Administration Asks U.S. Supreme Court to Reject Harvard Affirmative Action Case*, ed. Lincoln Feast, Reuters (Thomson Reuters, December 9, 2021)

16 Adam Liptak, *Supreme Court Will Hear Challenge to Affirmative Action at Harvard and U.N.C.*, THE NY TIMES January 24, 2022.

INTO THE FINAL FRONTIER: ANALYZING THE EFFICIENCY AND SOCIAL OPTIMALITY OF CELESTIAL RESOURCE ALLOCATION FRAMEWORKS

Susannah E. Barnes '21

ABSTRACT: *This paper evaluates the various frameworks proposed to allocate celestial resources. While assets in space are countless, entrepreneurs are unable to serve their Kirznerian function and equilibrate the market due to uncertainty stemming from ambiguities in international law. I examine three potential clarifications to international law to allocate rights and the resulting efficiency and social outcomes. Frameworks backed by international bureaucracies face large hurdles in allocating property rights in an economic fashion and providing incentives for rent-seeking instead of innovation. A system of unbridled property rights, affirmed by international law, yields the most effective and socially optimal outcomes, while being both theoretically and practically feasible. This paper thus provides support for the establishment of property rights in space.*

When man first stepped foot on the moon in 1969, the prospect of property rights and private enterprise in outer space seemed light-years away. Private enterprise on the moon, however, is not as far in the future as previously believed. With public figures like Elon Musk, Jeffrey Bezos, and Richard Branson investing in space exploration, the necessity of establishing a resource allocation framework is pushed to center stage. The current legal system governing property rights in space is ambiguous and may generate uncertainty that disincentivizes entrepreneurs from innovating and capitalizing on the wealth-creating opportunities in the final frontier. Prior to the expansion of space exploration, the resolution of these ambiguities was trivial, but now it is of utmost importance. This paper aims to ascertain what reforms to the legal regime must be made in order to create a resource allocation framework that creates wealth and provides certainty for entrepreneurs and investors. Evaluating the main means of resource allocation demonstrates that a system of unbridled property rights, affirmed by an international legal regime that recognizes and enforces those rights, would be socially optimal and provide increased certainty for entrepreneurs and investors.

The literature on allocation of resources in space can be divided into two camps: legal literature that focuses on the international law governing resource rights in space, and economic literature that articulates frameworks for resource allocation and assesses their efficacy. Both sides of the discussion are equally important for creating a space regime that is equitable and efficient. This paper, therefore, answers the question of resource allocation through both a legal lens and an economic lens. The legal lens allows for an evaluation of current statutes, their loopholes, and potential reforms.

The economic lens allows for an evaluation of proposed solutions, their efficacy, and whether the resulting outcomes are socially optimal.

The Role of Property and the Entrepreneur

Since Ronald Coase's seminal paper "The Problem of Social Cost," economists have dedicated a large portion of their efforts to determining the effect of property rights on market allocation. How property rights and ownership are divided affects output and has a significant variance across different institutional arrangements. Clearly defined property rights give way to proper assignment of cost and benefits that can promote social welfare. Alchian and Demsetz 1973 demonstrates that having a property right is having a socially structured bundle of rights to make use of something in a way that benefits society at large. The ability to use, exchange, and exclude others from use is because property rights imply responsibility rather than control.[1] As entrepreneurs calculate the costs and benefits in the face of broader social responsibility, they are incentivized to make smart decisions that conserve resources and maintain capital for future production.

Defining the Entrepreneur

To have a positive framework for what the entrepreneur is and their function, this paper will utilize the Kirznerian definition of the entrepreneur. Israel Kirzner defines the entrepreneur as an agent that seizes previously unrecognized profit opportunities by discovering disequilibria due to prior entrepreneurial errors in the allocation of resources. The entrepreneur has an equilibrating effect on the market by

1 Armen A. Alchian & Harold Demsetz, *The Property Rights Paradigm*, 33 Am. Econ. Rev. 16, (1973).

putting supply back in line with the desire of consumers via arbitrage.[2] The entrepreneur in this framework corrects the "seething mass of unexploited maladjustments" found in a disequilibrated market.[3] Baumol 1996 defines a trichotomy of positive, unproductive, and destructive entrepreneurship. Productive entrepreneurship contributes to societal wellbeing by introducing new products or processes. Unproductive entrepreneurship obtains transfers, typically via rent-seeking or violence. Destructive entrepreneurship is when resources are expended to capture rents or expropriate.[4] Institutions, however, enable or constrain entrepreneurial activity and decide whether entrepreneurship will be productive, unproductive, or destructive.

This positive framework demonstrates the importance of the entrepreneur as well as the importance of having a well-ordered institutional framework. Getting to space is costly, and extracting resources is even more so. Creating an institutional framework that encourages productive, or "occupational," entrepreneurship and ensures residual claimancy is necessary to encourage entrepreneurs to innovate and capitalists to invest.

Archaic International Space Laws and Their Loopholes

Outer Space Treaty

The Outer Space Treaty (hereafter referred to as the OST) was enacted in 1966 by the United Nations General Assembly to provide a rudimentary framework

2 Israel M. Kirzner, Competition and Entrepreneurship, 30-74 (Univ. Chicago Press, 1st ed. 1973).

3 Israel M. Kirzner, Perception, Opportunity, and Profit: Studies in the Theory of Entrepreneurship, 119 (Univ. Chicago Press, 1st ed. 1979).

4 William Baumol, *Entrepreneurship: Productive, unproductive, and destructive*, J. Bus. Ventures, 3 (1996).

on international space law. The OST required that the exploration of outer space be for the benefit and interests of all of mankind and all countries. Article I of the OST declares the celestial bodies as free for exploration and use by all states and that there shall be "free access" to the moon and other planets. The treaty required that outer space would not be subjected to national appropriation by claim of sovereignty, by means of use or occupation, or by any other means.[5] The OST was not designed to be comprehensive. It was created when space travel was in its infancy and sought to address issues that may arise as space travel and space technology became more likely.

Since its advent, critics recognize the treaty's pitfalls, accusing the guidelines of being too vague to provide states with direction to overcome any of the practical challenges associated with lunar exploration. As space law pioneer Ivan Vlasic presciently pointed out in his 1967 evaluation of the OST:

> The imminence of the manned exploration of the moon urgently requires a formulation of more detailed standards and procedures which will permit the disciplined implementation of this freedom and simultaneously safeguard the interests of all present and future participants in the exploration and use of celestial bodies.[6]

This problem has not only persisted since the 1960's but has also become more pervasive. The lack of enforcement mechanism or defined threshold for violations gives way to infringements and legal loopholes that undermine the very

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5 G.A. Res. 2222 (XXI) (1966), https://www.unoosa.org/oosa/en/ourwork/spacelaw/treaties/introouterspacetreaty.html.

6 Ivan Vlasic, *The Space Treaty: A Preliminary Examination*, 507 Cal. L. Rev. 513 (1967).

purpose of the OST.[7]

Moon Agreement

The Moon Agreement was created in 1979 to address OST's pitfalls and create a framework for property rights in space. The Moon Agreement aimed to clarify rights and responsibilities and establish a legal regime for the exploitation of resources on celestial bodies. All spacefaring nations at the time, however, rejected the Moon Agreement, except for France, Guatemala, India, and Romania who signed. In effect, the Moon Agreement is a failed treaty because no country that has ever completed a manned mission to outer space signed it.

The Moon Agreement is nonetheless important to consider. The primary reason that spacefaring nations rejected the Moon Agreement is due to the prohibition of property claims on celestial bodies, declaring space the "common heritage of mankind." The Agreement called for an international bureaucracy to oversee space exploration, giving power to countries without spacefaring power. Since countries without stake would have power over space activities, they could make unwise choices, or decisions with costs borne only by space faring nations.[8] The fear of having decision-making power in the hands of countries without residual claimancy was a strong enough deterrent for space faring nations to reject the Moon Agreement in its entirety.

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7 F.R Ishola et al., *Legal Enforceability of International Space Laws: An Appraisal of 1967 Out Space Treaty*, 9, 33 New Space (2021), http://doi.org/10.1089/space.2020.0038.

8 Carol Buxton, *Property in Outer Space: The Common Heritage of Mankind Principle vs. the First in Time, First in Right, Rule of Property*, J. 69 Air L. Com. 689, (2004).

Legal Loopholes

As space technology developed, the lack of explicit rules further complicated the legal regime and created conflict among UN member states. In 2015, the United States government legalized material extraction from celestial bodies by private companies through the US Commercial Space Launch Competitiveness Act. This provided legitimacy for entrepreneurs like Musk, Bezos, and Branson who hoped to bring space exploration into the private realm. In 2020, President Donald Trump affirmed the US's attempt to encourage space extraction through an executive order urging firms to explore the final frontier. Luxembourg followed the US's lead and legalized extraction in 2017. While Luxembourg was not previously a spacefaring nation, they aspire to be a leader in the nascent race to mine space resources. Countries like Japan, the United Arab Emirates, and Portugal joined forces with Luxembourg in hopes of also gaining from space extraction. Many argued that the legislation by the US and Luxembourg provided an answer to the complex question of ownership in outer space: "finders, keepers."[9]

Despite the seeming resolution of the debate over ownership, countries are critical of the actions of the US and Luxembourg, even following clarifications about legislation. At a meeting of the UN Committee on the Peaceful Uses of Outer Space, countries like Italy, Belgium, and Russia condemned the laws, calling them a direct violation of both the OST and the Moon Agreement.[10] Russia likened

9 Senjuti Mallick & Rajeswari P. Rajagopalan, *If Space is 'the Province of Mankind', Who Owns its Resources?*, Observer Rsch. Found. (2019), https://www.orfonline .org/wp content/uploads/2019/01/ORF_Occasional_Paper_182_Space_Mining.pdf.

10 Thomas Cheney, *Reactions to the US Space Act 2015: Statements at COPUOS*, Space Generation Advisory Council (Apr. 21,

the actions of the United States to colonialism, following Trump's executive order.[11]

The outcry at the decisions made by the US and Luxembourg to legalize space extraction further demonstrates why clarifying the international regime is so important. The lack of a harmonious legal system can harm entrepreneurs as they take on a global venture. Something that may be perfectly acceptable under the United States' interpretation of UN treaties may be impermissible in another country, leaving firms legally vulnerable.[12] The legal vulnerability also dissuades investment as investors have no assurance that they will ever receive a return.

What's at Stake

Benefits of Space Exploration

Outer space holds vast untapped potential for wealth-creation. The benefits available to innovative entrepreneurs include bountiful natural resources, opportunities for technological advancement, and the development of space tourism. An asteroid only a kilometer in size, for example, could provide billions of tons of iron, nickel, cobalt, and platinum worth approximately one trillion dollars.[13] To take another example, the iron on the asteroid 16-psyche

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2016), https://www.universiteitleiden.nl/binaries/content/assets/rechtsgeleerdheid/instituut-voor-publiekrecht/lucht--en-ruimterecht/6.-reactions-to-the-us-space-act-2015-cheney.pdf.

11 Cecilia Jamasmie, *Experts Warn of Brewing Space Mining War Among US, China and Russia*, Mining (Feb. 2, 2021), https://www.mining.com/experts-warn-of-brewing-space-mining-war-among-us-china-and-russia/.

12 Hans von der Dunk, *Billion-dollar Questions?*, 23 Uniform L. Rev. 418 (2018).

13 Sarah Coffey, *Establishing a Legal Framework for Property Rights to Natural Resources in Outer Space*, 41 Case Western Reserve J. Int'l L. 119 (2018).

has an estimated value of $10,000 quadrillion, or 70,000 times the world's economy.[14] The values of these asteroids alone speaks volumes to why space exploration should be encouraged.

Space resources also could address critical problems facing the world today. As the supply of fossil fuels depletes, helium-3 can serve as an excellent source of clean energy. In a fusion reaction, helium-3 creates an ultra-efficient and ultra-clean source of energy. While fusion reactions have not yet been sustained, an entrepreneur would have a massive incentive to develop the technology if mining of helium-3 were permitted. The helium-3 resources on the moon could produce ten times as much energy as the Earth's recoverable coal, oil, and gas combined.[15] Once the technology for helium-3 fusion reactors can support power on a large scale, it could reduce fossil fuel usage down to almost zero. Due both to the nature of helium-3 and the emissions from fossil fuels, switching to helium-3 energy would have a drastic effect on climate change[16]. After the initial costs of mining, the first entrepreneur to successfully extract helium-3 would have an immense gain—a single ounce of helium-3 is valued at $40,000, making it an extremely lucrative resource.[17] Furthermore, an investor who provides capital to back Helium-3 reactors would see massive gains from being a

14 Doyle Rice, *This Isn't Your Typical Space Rock: There's a Metal Asteroid Out There Worth 10,000 Quadrillion*, U.S.A Today, Oct. 29, 2020, https://www.usatoday.com/story/news/nation/2020/10/29/metal-asteroid-psyche-nasa-hubble-images/6069223002/.

15 Coffey, s*upra* note 13 at 122.

16 A. Hirwa et. al., *The Creation and Logistics of a Lunar Base*, Worcester Polytechnic Inst. (Jul 20, 2010), https://web.wpi.edu/Pubs/E-project/Available/E- project-073120-224717/unrestricted/The_Creation_and_Logistics_of_a_Lunar_Base.pdf.

17 Harrison H. Schmitt, *Mining the Moon*, Popular Mechanics, Dec, 7, 2004, at 56.

first mover, creating a huge incentive for both entrepreneurs and investors.

Certain pharmaceuticals are best tested or developed in space. The microgravity conditions in space make it easier to study protein crystallization, which allowed pharmaceutical giants, like Merck, to improve upon life-saving drugs. Versions of Merck's lifesaving chemotherapy drug, Keytruda, developed in space had shorter, less frequent, and less burdensome delivery due to different protein crystallizations in microgravity conditions. The intergalactic version of Keytruda provided patients with the same quality of care without the onerous conditions commonly associated with the drug.[18] Besides chemotherapy, drug research in space addressed issues like organ transplants, embryonic development, and bone degenerative diseases.[19] The future of drug development outside of the earth's orbit is bright and could have significant effects on chronic and life-threatening illnesses. The costs are prohibitively high, however, for firms without an immense amount of capital like Merck or other giants like Eli Lilly or AstraZeneca. In addition to pharmaceutical testing, recent research found that the amount of precious metals and elements on the moon far exceeds any previous estimates, further demonstrating the amount of unrealized capital from celestial mining and exploration.[20]

Entrepreneur and Investor Disincentives

When such a clear profit opportunity exists,

18 Katrina Zimmer, *Pharma Looks to Outer Space to Boost Drug R&D,* The Scientist (Dec. 1, 2020), https://www.the-scientist.com/bio-business/pharma-looks-to-outer-space-to-boost-drug-rd—68183.

19 Mark Greener, *Drug Discovery and Development*: *The Final Frontier*, 31 Prescriber 18 (2020).

20 E. Heggy et al., *Bulk Composition of Regolith Fines on Lunar Crater Floors: Initial Investigation by LRO/Mini-RF*, Earth and Planetary Sci. Letters (2020) at 541.

economists and lawmakers alike should be questioning why entrepreneurs are not actively capturing economic rents, especially when utilizing the Kirznerian definition of the entrepreneur. For many investors, the legal intricacy is to blame. Private firms that hope to invest in potential space enterprises frequently point to the prohibition of space ownership by international treaties as a major barrier to the future commercialization of space. Firms contend that the absence of property rights deters investors, jeopardizes their investment in space, and generates uncertainty about income appropriation. The uncertainty generated by the legal regime makes the costs of space exploration for entrepreneurs and investors outweigh the benefits.[21] The debate over the common heritage concept leaves entrepreneurs questioning if they could make a claim to materials in space, and if they were to claim it, if they would get the benefit. It is virtually impossible for a firm or nation to calculate the potential return-on-investment for mining outer space if the legal status of the claim is unknown.[22]

Suggested Policy Proposals

To address the ambiguities of the legal regime, space law experts suggest various
reforms to streamline the legal system and remove the disincentives for entrepreneurs. Three main frameworks emerged within the literature: a system modeled after the

21 Henry Hertzfeld & Hans von der Dunk, *Brining Space Law into the Commercial World: Property Rights without Sovereignty*, Space, Cyber, and Telecommunications L. Program Faculty Publ'n (2005) 15, https://digitalcommons.unl.edu/spacelaw/15/.

22 Jeremy L. Zell, *Putting a Mine on the Moon: Creating an International Authority to Regulate Mining Rights in Outer Space*, 15 Minn. J. Int'l L. 489 (Nov. 29, 2021), https://scholarship.law.umn.edu/mjil/99.

International Seabed Authority, a system of credits similar to Cap-and-Trade, and unbridled property rights. To provide an objective framework for analysis, each policy will be evaluated through two criteria: (1) efficiency and (2) social optimality. As this is fundamentally a question of how to allocate resources, these two criteria provide a clear structure for weighing each of the three options.

International Space Regime (ISA)

The first framework for resource allocation aims to fit within the established goals of the Moon Agreement, desiring to create an international space regime that would develop and protect property rights in space. This allocation method is permissible under the Moon Agreement as long as the sharing is equitable.[23] An authority of this kind is not unprecedented and could be modeled after the International Seabed Authority (ISA), which oversees mining interests in international waters. Like in space, the deepest parts of the world's oceans are largely unexplored and house vast untapped potential. The ISA was created to formulate and enforce rules for mining that occurs outside of national jurisdictions and ensure that marine environments are not harmed during the mining process.[24] Under this system, if a firm or nation want to mine and have proprietary rights over the extracted materials from these seabeds, they must receive a permit from the ISA. The permit process is rigorous—when a company or country believes they discovered minable materials, they must pay a fee to get an exploration permit, plus a fee during the exploitation phase.

This system aims to solve the entrepreneurial

23 G.A. Res. 34/68, ¶ 11 (Dec. 5, 1979), https://www.unoosa.org/oosa/en/ourwork/spacelaw/treaties/moonagreement.html.

24 *Deep Sea Mining: The Basics*, Pew Charitable Trust (Feb. 3, 2017), https://www.pewtrusts.org/en/research-and-analysis/fact-sheets/2017/02/deep-sea-mining-the-basics.

disincentive by providing certainty in the exploitation process while ensuring that habitats are not exploited. A similar permitting system could be created for space. Entrepreneurs could be given permits to explore and extract materials in space with the UN Office for Outer Space Affairs serving as the primary authority over formulating rules and enforcing them. In theory, this would not only solve the problems of the status quo but also maintain the "common heritage of mankind" outlined by the Moon Agreement.[25]

While this first framework sounds promising, there is a large amount of inefficiency generated by an ISA-style regime. With an international body allocating resources without access to profit and loss signals, it is doubtful that the international regime could efficiently allocate resources. There is no guarantee that the authority's allocative decisions will be based on comparative advantage and will instead likely be based upon grants of special privilege. These grants of special privilege shift valuable resources away from innovation and exploration efforts towards lobbying and rent-seeking. The International Seabed Authority is beset with rent-seeking and corruption, which negatively effects entrepreneurship and exploration of resources in the seas.[26] This would likely continue into the final frontier. Because resources would be shifted away from innovation and entrepreneurship, the resulting outcomes from an ISA-regime would not be socially optimal or efficient.

Credit System

A second form of international space regime is tradable credits for space resources. While such tradable

25 Zell, s*upra* note 22.

26 Doug Bandow, *The Law of the Sea Treaty Impeding American Entrepreneurship and Investment*, Center for Entrepreneurship, 1, (2007).

credit systems are best known for monitoring greenhouse gas emissions, such systems are applied to water resources, fisheries, and land control, raising the possibility that they could also be used to allocate resource rights on celestial bodies. Applied in the context of an international space regime, credits with a set expiration date could be allocated representing a certain tonnage of natural resources on celestial bodies. In theory, setting a specific tonnage limit gives companies an incentive to be wise with their mining location, and the expiration date prevents parties from hoarding credits. Proponents claim that by allowing parties to freely trade credits, parties will economize property rights on the moon as more eager parties will buy up credits from those that are less capable of exploring space. This makes the task of the international central authority less onerous since they are no longer responsible for picking and choosing who receives credits. Finally, advocates contend that credits should be given to non-spacefaring nations as well so that they might also benefit from space exploration by selling their credits.[27]

A tradeable credit system faces many challenges. Despite what proponents claim, a bureaucratic mechanism for determining credit allocation would still be necessary for the initial allocation. There are countless ways credits could be distributed to countries and without an initial mechanism in place to distribute the credits, misallocation may become more pervasive. Further, the international regime must decide how many credits to initially allocate. The latter question poses difficulty as the international regime does not have access to the
knowledge necessary to make these allocative decisions.[28]

27 Coffey, *supra* note 13.

28 Gary C. Libecap, *Lots of Cap, Very Little Trade*, Hoover Inst. (Sept. 28, 2017), https://www.hoover.org/research/lots-cap-very-little-

Credit allocation is likely to become an arbitrary process, making it both inefficient and suboptimal.

Property Rights

The final clarification to international law is admittedly simple—allow for the extraction of resources and recognize extracted resources as the property of the extractor. In this framework, countries would have the prerogative to utilize space resources as they see fit and private enterprises would be able to do the same. Creating a defined framework of rights that allows for the use and exchange of space resources would encourage investment and entrepreneurship, without the bureaucracy associated with other space regimes. It is important to clarify that this does not necessitate claims of sovereignty in space but only claims over what is extracted from space.

Many fear that a lack of lunar law would create the Wild West in space. In the absence of regulation, states would militarize the moon and engage in conflict with other would-be users to gain monopoly power and excludability over resources. Some opponents of celestial property believe that a lack of lunar regulation would lead to World War III and create a new battleground for armed conflict.[29] While the concern is valid at face value, the Wild West was not a chaotic and violent hunt for monopoly and excludability. In the absence of government, property rights were well protected and civil order prevailed. Private arbiters and agencies ensured that society did not devolve into chaos. Land clubs, cattlemen's associations, mining camps, and more served as pseudo-governments and overcame the problem of order in

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trade.

29 Benjamin D. Hatch, *Dividing the Pie in the Sky: The Need for a New Lunar Resources Regime*, 29 Emory Int'l. L. Rev., 229, (2010).

the Wild West. The disorder that was apparent in the Wild West did not come from a lack of regulation but instead from a lack of a defined framework of rights.[30] In space, this disorder is easily avoidable. By making it explicit that a claim to property in space is a claim to the entire bundle of rights (being useability, exchangeability, and excludability as earlier defined by Alchian and Demsetz)[31] *ex ante*, conflict would be much less likely.

Property rights are a preferable means of resource allocation due to their spontaneous emergence. Property rights regimes frequently ebb and flow in accordance with the needs and wants of a society or system. Systems that emerge from the bottom-up and are enforced by formal legal regimes allow for the most societal wealth. Further, when property rights are created by groups with a common interest, or groups who are in continuing relationships with information sharing, property rights not only create a large amount of wealth but are also wealth-maximizing. Property rights arrangements based on the needs of a given order lead to socially optimal outcomes.

Theoretical Feasibility

On a theoretical level, the conventional wisdom of property rights can be illustrated through the analytical device of the Prisoner's Dilemma.

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30 Terry Anderson and P.J. Hill, *American Experiment in Anarcho-Capitalism: The Not So Wild, Wild West*, The J. of Libertarian Studies, 3, 9, (1979).

31 Alchian and Demsetz, *supra* note 1.

Party A	Party B		
	[redacted]	Cooperate	Defect
	Cooperate	(4,4)	(0,6)
	Defect	(6,0)	(2,2)

Figure One

The Prisoner's Dilemma matrix depicts the choices of party A and party B as belonging to two columns: "cooperate" by respecting the other party's rights or "defect" by violating the other party's rights. Each respective party benefits the most if the other party chooses to cooperate, but they choose to defect. Likewise, each respective party suffers the greatest losses if the other party defected while they chose to cooperate. If both parties defect, they will not benefit as much as if they had both cooperated. Under these conditions, the traditional logic is that both parties will always defect because if you expect the other party to cooperate, you will benefit more from defecting. But likewise, if you expected the other party to defect, you would be better off defecting as well to mitigate your losses or at least cause your competition to experience losses as well.

This analysis erroneously assumes that the interaction between parties in space will be analogous to a single game of the Prisoner's Dilemma, while it is better exemplified by a super game. In the Prisoner's Dilemma, the number of games is finite, implying that there is no reward and punishment from actions. A lack of consequences dictates the actions of the players before the game begins, causing the game to unravel. Conversely, a super game occurs when the same game is played multiple times and the players are interested in their long run average payoff. When there is uncertainty about when the game will end, incentives change. If the number of games is finite, players will act in their short-term interest, but if parties must consider the long-term impacts

of their decision, they are more likely to cooperate because they want to preserve cooperation with the other party to experience positive payoffs in the long run. Future-oriented thinking prevents parties from defecting, since the benefits are one-time, but the costs of lost cooperation are long-lasting. As the folk theorem dictates, the game never hits an unraveling bound like the finitely repeated games because there are numerous reward and punishment outcomes likely.[32]

As cooperation is a major theme of space law and policy, considering what would make players cooperate is important. Creating a system that in turn generates a system of continuous dealings will promote cooperation as players are incentivized to think long-term to experience positive payoffs. In this way, property rights can be considered self-enforcing. Individuals will not expropriate and destroy space resources or cheat in trade in response to the uncertainty surrounding the rounds of the games. Because information sharing is likely in this market, any player who chooses to defect would have difficultly finding trading partners or people willing to invest.[33] In essence, anyone choosing to defect from the property regime and norms established around space trade would close themselves off from space wealth entirely.

Space Law and Policy Going Forward

The survey of proposed policies demonstrates that a system of unbridled property rights is superior to other forms of resource allocation. Unbridled property

32 Jeffrey C. Ely and Juuso Välimäkib, *A Robust Folk Theorem for the Prisoner's Dilemma*, 102 J. of Econ. Theory, 84, (2002).

33 Gordon Tullock, *Adam Smith and the Prisoners' Dilemma*, 100 Q. J. of Econ., 1073, (1985).

rights systems exist when the ability to use, exchange, and exclude is subjected to minimal constraints. Although some refer to a system of this kind as being "anarchic," this is a mischaracterization. The principal criticism of the current legal regime is not that it provides a check on what is done in space, but that it provides an incorrect or incomplete check on what is done. The regulations promulgated by the OST and the Moon Agreement do not provide a sufficiently stable and predictable framework which then discourages investors. Allowing for individuals to do as they please with their property, bolstered by the legal certainty inherent in a system that provides defined property rights, would energize the space industry instead of stalling it. This expropriation of resources, however, must take place under a harmonious international legal regime. The current system that allows individual countries to interpret the law as they see fit has caused chaos, confusion, and uproar. This disjunction is much more conflict-prone than a system of unbridled property rights.[34]

First-Come-First-Serve Laws

How, then, should property disputes be resolved under this system? First-come-first-serve rules would provide a simple and efficient mechanism for solving issues that arise in the allocation of property in space. First-come-first-serve laws allocate property rights to the first person to stake claim to a given area. In these systems, property owners have the right to use the property they claimed as they see fit, without concern of aggression. Coase originated the economic theory of the first-come-first-serve doctrine and established that these rules would be more effective than

34 Lynn M. Fountain, *Creating Momentum in Space: Ending the Paralysis Produced by the 'Common Heritage of Mankind' Doctrine*, Conn. L. Rev., 35, 1753 (2003).

a rigid rule, especially when courts are faced with the task of interpersonal utility comparisons.[35]

In a first possession system, whoever stakes claim to a given space or material would be the only one afforded the opportunity to extract it. Throughout legal history, first-come-first-serve systems took different forms of enforcement based on the institutional arrangements surrounding the disputes. Whalers in the 1850s, for example, developed two distinct systems of property rights based on the type of whale of which they were trying to stake ownership. If whalers were hunting right whales, they would have ownership as long as the whale was fastened by a line to the claimant's boat. If whalers were hunting sperm whales, however, the whaler would have ownership if the whale had been harpooned and the boat stayed in pursuit, regardless of if the line was attached. Neither of these systems were codified in law, but instead enforced by social norms.[36] A similar emergence of legal rules could be expected in the space regime. While it is difficult to assess what property rights systems will emerge and how first possession will be respected and enforced, legal and economic history demonstrates that property rights arrangements based on the needs of a given order lead to socially optimal outcomes.

More recent analyses demonstrate that in comparison to strict liability and negligence rules, first-come-first-serve laws provide socially optimal outcomes. By imposing liability when externalized costs are in excess of externalized benefits, first-come-first-serve laws induce agents to choose socially optimal activity levels. For any activity, an actor will

35 Ronald H. Coase, *The Problem of Social Cost*, 3 J. OF L. AND ECON. 1, (1960), at 3.

36 Robert C. Ellickson, *A Hypothesis of Wealth-Maximizing Norms: Evidence from the Whaling Industry*, J. OF L., ECON., AND ORG., 5, 83, (1989).

set their privately optimal level at the point that maximizes utility from that activity. While the activity level that satisfies the private optimum may vary from the that which satisfies the social optimum, when cost and benefit externalities are equal, the socially and privately optimal activity levels will also be equal. While there may be cases where the divergence between what is socially optimal and what is privately optimal is extreme, it is likely that the market will correct for the large divergence and regulate the activity level back to an equilibrium.[37]

First-come-first-serve laws are not only propounded by economists, but legal scholars. Legal scholars believe that first-come-first-serve laws would be effective for addressing problems like space debris. The implementation of first-come-first-serve laws, however, was unsuccessful due to the common heritage clause and bans on sovereignty. Following the establishment of property rights, a first-come-first-serve law could be implemented, addressing not only the concerns affiliated with mining but other space concerns as well. Legal scholars support first-come-first-serve laws because of their enforcement. Injunctions, the textbook remedy for nuisance laws[38], help prevent future aggression and ensure that the same action is not taken by the same actor again. Even when injunctions are difficult to enforce, legal precedent demonstrates that they are still effective. In *Boomer v. Atlantic Cement Co.,*[39] a cement plant polluting a region was found to be a nuisance but because of the value of the plant and the cost of eliminating pollution, the court issued permanent damages as opposed to injunctions. Like in

37 Keith N. Hylton, *The Economics of Public Nuisance Law and the New Enforcement Actions,* 18 Sup. Ct. Econ. Rev., 43, (2010).

38 *Nuisance laws being the standardized legal term for first-come-first-serve laws.*

39 *Boomer v. Atlantic Cement Co.***,** 257 N.E.2d 870, 872 (N.Y. 1970)

Boomer, harm caused by mining or debris could be remedied by money damages, if injunctive relief was not viable.[40]

Property disputes could occur in international courts, but it is also likely that private arbiters would be erected to address issues that arise in space. There are practical examples of private parties enforcing their rights independent of governments. In international commerce, for example, parties involved in trade are from different countries and no formal supranational sovereign exists to define or enforce property rights among those engaging in trade. Rather than inhibiting commerce, international commerce generates roughly a quarter of the world's wealth every year. Traders formed a private framework of self-enforcing property rights, commonly utilizing private international arbitration associations instead of a government authority. As many as 90 percent of international commercial contracts stipulate the resolution of disputes via private arbitration. Leeson and Salter note that "in 2001 roughly 1,500 parties from 115 countries used the arbitration services of the International Chamber of Commerce (ICC), the largest of such organizations, in property conflicts that ranged in value from $50 to $1 billion." Furthermore, parties largely respect the ICC's decisions. The ICC estimates parties comply voluntarily in 90 percent of its decisions.[41]

Lessons from Coase

In some circumstances, the Coase Theorem may apply to the final frontier. When rights are well-defined, agents can easily negotiate terms of trade and assets will be allocated to the user who values them more, irrespective of

40 Luke Punnakanta, *Space Torts: Applying Nuisance and Negligence to Orbital Debris,* 86 S. California L. J. 163, (2012).

41 Peter T. Leeson and Alexander W. Salter, *Celestial Anarchy: A Threat to Outer Space Commerce?,* Cato J., 34, 581 (2014).

who was initially allocated rights.[42] While this may seem unlikely with such a vast market, the establishment of property rights would reduce transaction costs in the process. Property rights provide certainty to owners and reduce expropriation risk. Low risk allows asset owners to make optimal decisions at negligible transaction costs and avoid the tragedy of the commons and inefficient uses of scarce resources.[43] Further, property rights reduce the incentive to shirk or free ride, leading to efficiency and more productive processes, while reducing monitoring costs.[44] It is likely that the establishment of property rights in space will reduce transaction costs, making bargaining more likely.

While most legal writing, including by Coase himself, implies that disputants use formal legal systems to resolve disputes, there are many examples of Coasean bargaining used even when courts or other means are available. Shasta County, California maintains a legal system based largely on social ostracism. Property disputes are solved outside of formal means, and those who do use formal means are considered "odd ducks." In Shasta County, it is much more costly to carry out legal proceedings, so the rational actors apply informal norms, instead of laws, to evaluate behavior. This is fully consistent with Coase's central idea that regardless of the law, people will structure their affairs to their mutual advantage.[45]

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42 Coase, *supra* note 35.

43 Mushtaq Khan, *Governance Capabilities and the Property Rights Transition in Developing Countries*, SOAS – Univ. of London, (2009), https://eprints.soas.ac.uk/9966/1/
Property-Transitions.pdf.

44 Armen A. Alchian and Harold Demsetz, *Production, Information Costs, and Economic*
Organization, Am. Econ. Rev., 62, 777 (1972).

45 Robert C. Ellickson, *Of Coase and Cattle: Dispute Resolution Among Neighbors in Shasta County*, Yale Law School Faculty

When there is as much at stake as there is in space exploration, parties will be likely to negotiate in order to bring about optimum outcomes. Especially with private enterprises motivated by providing a profit to shareholders, there is high likelihood for cooperation among individual states and firms. Coupled with the game theoretic knowledge previously established, the Coase Theorem further demonstrates that a system of unbridled property rights in space will bring about social welfare and cohesion, both in the earth's atmosphere and beyond.

Conclusion

Through both an economic lens and a legal lens, allowing for property rights on celestial bodies is necessary to encourage investment and capitalize on the vast resources available on the moon. The current legal regime is too ambiguous to encourage entrepreneurship and deters entrepreneurs from acting as an equilibrating force on the market. To address these ambiguities, international actors should allow for residual claimancy and make it explicit that property claims to exploit resources are valid. This does not necessitate ownership over a part of the moon, it only necessitates that claimants have ownership of the resources they extract. Allowing for ownership over resources also does not necessitate a complete omission of previous norms and laws surrounding the use of space. Through legal systems, like first-come-first-serve laws and extralegal norms, like Coasean bargaining, property rights further ensure that space is protected. When compared with other allocation methods, property rights are not only efficient, but also bring about socially optimal outcomes.

Scholarship Series, 466 (1986).