Paper Title: Examining Religion and Technology: Nuclear Weapons and the Roman

Catholic Church

Author(s): Hintz, Eric

Institutional Affiliation(s): Graduate Student, History and Sociology of Science,

University of Pennsylvania and intern, Metanexus Institute

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Abstract:

In 1962-1963, at the height of the Cold War, the world seemed to be teetering on the brink of nuclear disaster. Suddenly, an entirely new input entered the international peace process. On Holy Thursday, April 11, 1963, Pope John XXIII, the head of the Roman Catholic Church, released his encyclical *Pacem in Terris*, or "Peace on Earth." Pope John decried the presence of nuclear weapons, calling for an immediate cessation of the arms race, mutual and complete disarmament, and an end to nuclear weapons testing.

In my paper, I explore the historical context which motivated the release of *Pacem in Terris*, and its impact - both within the Catholic Church and in the Cold War political arena. In analyzing this episode, I draw on contemporary press coverage and political commentary; Catholic theological and doctrinal texts; and the writings, speeches, correspondence, and personal reflections of the story's three principal actors: Pope John XXIII, Soviet Premier Nikita Khrushchev, and U.S. President John F. Kennedy.

I argue that Pope John XXIII's papacy, and especially the encyclical *Pacem in Terris*, marked the Catholic Church's entrance as a new voice in the nuclear weapons discourse of the 1960s and that Pope John materially influenced the direction of nuclear weapons diplomacy leading up to the Limited Test Ban Treaty of 1963. In addition, I argue that *Pacem in Terris* was emblematic of several doctrinal changes and new attitudes appearing *within* the Catholic Church. For Catholics, *Pacem in Terris* signaled a new, more optimistic attitude toward modernity, a rapprochement with atheistic Communism, and a move from medieval, Augustinian just-war teachings towards idealistic pacifism.

In summary, my topic concerns *religion and technology*, more so than religion and science; my approach is *sociological and historical*. Thus, I do not suggest that the Catholic Church directly influenced the internal design or construction of nuclear weapons. Rather, I view the Catholic Church as a forceful social and political entity, which influenced the trajectory of how a particular technology was publicly perceived and regulated. I also see the social interaction operating in the opposite direction, as the specter of this new and dangerous technology provoked changes to Catholic theology. More broadly, I am suggesting the importance of religious considerations among the range of social forces which influence the historical development of technologies.

Biography:

Eric Hintz is a graduate student and William Penn Fellow in the history and sociology of science at the University of Pennsylvania, and an intern at the Metanexus Institute. Eric earned his B.S. in aerospace engineering from the University of Notre Dame in 1996, then worked for nearly 6 years in San Francisco as a technology consultant for Accenture. After leaving the corporate world, Eric taught both science and history in a San Francisco high school, and volunteered in an aviation museum. These experiences crystallized his preference for *teaching* and *researching* the history of science and technology, versus being a practitioner. This summer, in addition to his Metanexus internship, Eric is also the recipient of the 2005 Ullyot Scholarship from the Chemical Heritage Foundation, where he will conduct research on the invention and diffusion of electric batteries. Eric's historical interests are focused mainly on 19th and 20th century science and technology, with special interests in the history of invention and R&D, and the interplay between science, technology, and religion, particularly Catholicism. Eric enjoys playing drums, playing basketball, remodeling his house, cheering his beloved Fighting Irish, and hanging out with his wife Emma.

Paper Text:

Introduction: From "Science and Religion" to "Religion and Technology"

In April 1963, at the height of the Cold War, the world seemed to be teetering on the brink of nuclear disaster. As *Newsweek* reported, it was

a typical, muddled human week. The Geneva disarmament talks recessed for the umpteenth time with a familiar "no progress" report. The United Nations...was locked in a dispute over its prospects of bankruptcy...The Russians threatened trouble if the West Germans were given nuclear arms.¹

Suddenly, an entirely new participant entered into the international peace process. On Holy Thursday, April 11, 1963, Pope John XXIII, the head of the Roman Catholic Church, released a message entitled *Pacem in Terris*, which in Latin means "Peace on Earth." Calling it his "Easter gift" to the world, Pope John decried the presence of nuclear weapons, calling for an immediate cessation of the arms race, mutual and complete disarmament, and an end to nuclear weapons testing.² The encyclical, or circular letter, elicited positive commentary from a wide and ecumenical range of commentators; most notably, the encyclical received favorable comments from U.S. President John F. Kennedy, and Soviet Premier Nikita Khrushchev.

So why is the release of *Pacem in Terris* important in the context of science and religion? Historians and sociologists have long argued that external – that is, non-intellectual -

¹ "Pacem in Terris: For All Humanity," Newsweek, 22 April 1963, p. 22.

² Pope John XXIII, "The Spirit of *Pacem in Terris*: Reflections on the Encyclical, from Five Addresses by Pope John Xxiii," in *The Encyclicals and Other Messages of John Xxiii*, ed. The Staff of *The Pope Speaks* Magazine (Washington, D.C.: TPS Press, 1963), 376.

factors have influenced the history of modern science.³ Adherents of this so-called "constructivist" historical methodology believe in "the central notion that scientific knowledge is a human creation, made with available material and cultural resources, rather than simply the revelation of a natural order that is pre-given and independent of human action." Accordingly, historians of science have examined a variety of social factors which have influenced modern science – including the importance of religion.⁵

However, what if the focus of analysis were shifted from the history of science to the history of *technology*? Historians of technology, like historians of science, have also taken the sociological turn. Using constructivist methodologies, historians of technology have suggested that technological artifacts - like scientific ideas - are influenced by social factors. However, historians of technology have been less willing than their scientific brethren to examine religious considerations in their constructivist analyses.

With these methodological considerations in mind, my historical case study will explore the impact of religious considerations on a prominent and dangerous technology. I will argue that Pope John XXIII's papacy, and especially the encyclical *Pacem in Terris*, served as important influences in the Cold War diplomacy concerning nuclear weapons. I suggest that *Pacem in Terris* represented a profound shift in Catholic thought - away from the Church's 1500 year tradition of just war theology, and toward a new theology of pacifism – and that this shift was motivated by the dangers inherent in nuclear weapons. Furthermore, I argue that Pope John XXIII acted on this new theology of peace, and that his astute political maneuvers materially influenced the direction of Cold War diplomacy. Finally, I argue that Khrushchev and Kennedy responded to the Pope's diplomatic efforts,

³ Regarding the development of modern science, sociologist Robert K. Merton wrote that "internal factors include those changes which occurred within science and rational thought generally; the external include a variety of social factors." Quoted in Shapin, Steven, "Discipline and Bounding: The History and Sociology of Science as Seen Through the Externalism-Internalism Debate." *History of Science* 30 (1992):333-369, p. 340. Thus, internal factors are *cognitive/intellectual* influences that shape science, e.g. the appearance of the Copernican cosmological theory influenced Galileo's scientific beliefs. Meanwhile, external factors are *social* influences that shape science, e.g. Galileo's dependence on Medician patronage also influenced the day-to-day nature of his scientific activities.

⁴ Jan Golinski, *Making Natural Knowledge: Constructivism and the History of Science* (Cambridge: Cambridge University Press, 1998), 6.

⁵ Introductory historical studies include David C. Lindberg and Ronald L. Numbers, *God and Nature: Historical Essays on the Encounter between Christianity and Science* (Berkeley: University of California Press, 1986). John Hedley Brooke, *Science and Religion: Some Historical Perspectives* (Cambridge: Cambridge University Press, 1991). Gary B. Ferngren, *Science and Religion: A Historical Introduction* (Baltimore: Johns Hopkins University Press, 2002).

⁶ See Wiebe E. Bijker, Thomas Parke Hughes, and T. J. Pinch, *The Social Construction of Technological Systems: New Directions in the Sociology and History of Technology* (Cambridge: MIT Press, 1987). Donald A. MacKenzie and Judy Wajcman, *The Social Shaping of Technology: How the Refrigerator Got Its Hum* (Philadelphia: Open University Press, 1985).

⁷ A notable recent exception is Anna Gotlind, "Technology and Religion in Medieval Sweden" (Ph.D. diss., University Goteborg, 1993). Gotlind, following the approach of Lynn White, asks: "To what extent did the church, and in particular the monastic system, act as an importer, vehicle, and disseminator of technical knowledge in medieval Sweden?" (p. 10). See Lynn Townsend White, *Medieval Religion and Technology: Collected Essays* (Berkeley: University of California Press, 1978).

and even borrowed some of the Pope's own rhetoric in the months after the encyclical was released. The resulting thaw in the Cold War produced the Limited Test Ban Treaty, the very first agreement which limited nuclear weapons technology in any way. Thus, I propose that the dangerous nature of nuclear weapons led the Pope to alter his beliefs, and that his actions, in turn, helped alter the trajectory of that technology. More broadly, I am suggesting the importance of religious considerations among the range of social forces which influence the historical development of technologies.

Nuclear Weapons and the Arms Race

By 1963, the nuclear arms race was in full swing. Since their initial development at the end of World War II, nuclear weapons had not only become more numerous, but also more deadly. Since 1945, the United States and the Soviet Union had "improved" upon fission bombs to create thermonuclear weapons with destructive yields 3000 times more powerful than the first bombs exploded over Japan. And in the Cuban Missile Crisis of 1962, the superpowers had come dangerously close to using nuclear weapons again. The prospect of a full-scale nuclear war was horrific; in a January 1963 speech, Khrushchev himself estimated that 700-800 million people would perish. Plus, continued weapons development meant scores of test explosions which contaminated the seas and the atmosphere with harmful radioactive fallout. Thus, by 1963, nuclear weapons were understood to be a very unique and different kind of technology, one which literally threatened the entire planet.

John XXIII's Theology of Peace

Accordingly, when Cardinal Angelo Roncalli became Pope John XXIII in 1958, he announced that his pontificate would be devoted to the cause of peace. In his first public address as the newly elected Pope, John XXIII made a plea for peace to the world's leaders:

We would like to address the rulers of all nations...Look at the people who are entrusted to you! Listen to them! What do they want? What do they ask you for? Not for the new weapons our age has begotten for fratricide and general slaughter! But for *peace*, in which the human family may live, thrive and prosper freely.

But Pope John's attitudes differed significantly from his predecessor, Pope Pius XII, and in fact challenged 1500 years of so-called "just-war theology." Going all the way back to St. Augustine in the 5th century, Christian theologians had maintained the idea that war could be justifiable in cases of legitimate defense. Pope John's predecessor, Pius XII had

⁸ Nikita Khrushchev, "Address by Premier Khrushchev at the Sixth Congress of the Socialist Unity Party of Germany," in *Documents on Disarmament, 1963*, ed. United States Arms Control and Disarmament Agency (Washington, D.C.: U.S. Government Printing Office, 1963), 13.

⁹ Pope John XXIII, "This Anxious Hour: The First Public Address of Pope John Xxiii," in *The Encyclicals*

⁹ Pope John XXIII, "This Anxious Hour: The First Public Address of Pope John Xxiii," in *The Encyclicals and Other Messages of John Xxiii*, ed. The Staff of *The Pope Speaks* Magazine (Washington, D.C.: TPS Press, 1958), 13-14.

continued this tradition, even while calling for the abolition of atomic weapons; in a 1954 speech, Pius XII said,

For Our part, We will tirelessly endeavor to bring about, by means of international agreements - *always recognizing the principle of legitimate self-defense* - the effective proscription and banishment of atomic, biological, and chemical warfare. ¹⁰

But Pope John recognized that nuclear weapons constituted a <u>qualitatively</u> new weapon, and had witnessed the world come to the brink of nuclear holocaust during the Cuban Missile Crisis of October 1962. Thus, in January 1963, John XXIII began working on a message expressing a new theology of peace and told one of his assistants, "I want this document to be a document which both Kennedy and Khrushchev will want to read." 11

Pope John's message, *Pacem in Terris*, was an encyclical, or circular letter, which can be thought of as an internal memorandum from the Pope to his worldwide hierarchy of priests and bishops. However, with *Pacem in Terris*, Pope John broke precedent and addressed his encyclical, not only to the Catholic hierarchy, but to "all men of good will." In one of the most famous passages of the encyclical, Pope John challenged centuries of Christian just-war theology, in the face of nuclear weapons technology:

Just War Theory → **Pacifism:**

Men nowadays are becoming more and more convinced that any disputes which may arise between nations must be resolved by negotiation and agreement, and not by recourse to arms. We acknowledge that this conviction owes its origin chiefly to the terrifying destructive force of modern weapons... Thus, in this age which boasts of its atomic power, it no longer makes sense to maintain that war is a fit instrument with which to repair the violation of justice. 13

Furthermore, Pope John called for a multi-lateral reduction in arms, and the eventual abolition of all nuclear weapons:

On Disarmament:

...Justice, right reason, and the recognition of man's dignity cry out insistently for a cessation to the arms race. The stock-piles of armaments which have been built up in various countries must be reduced all round and simultaneously by the parties concerned. Nuclear weapons must be banned.¹⁴

¹⁰ Pope Pius XII, "The Threat of Abc Warfare, Address to the Peoples Assembled in St. Peter's Square, April 18, 1954," in *Catholic Peacemakers: A Documentary History*, ed. Ronald G. Musto (New York: Garland Publishing, Inc., 1996), 369. My emphasis.

¹¹ Roland Flamini, *Pope, Premier, President: The Cold War Summit That Never Was* (New York: Macmillan Publishing Co., Inc., 1980), 85.

¹² Pope John XXIII, "Pacem in Terris," in The Encyclicals and Other Messages of John Xxiii, ed. The Staff of The Pope Speaks Magazine (Washington, D.C.: TPS Press, 1963), 327.

¹³ Ibid. My emphasis.

¹⁴ Ibid., paragraph 112.

Nevertheless. Pope John was not entirely naïve in considering the arms race, for he understood the principle of deterrence. However, the pontiff also recognized that continued escalation and weapons testing posed real environmental dangers:

On Deterrence, Weapons Testing, and Environmental Hazards

"Unhappily, we often find the law of fear reigning supreme among nations and causing them to spend enormous sums on armaments. Their object is not aggression, so they say...but to deter others from aggression.¹⁵

Even though the monstrous power of modern weapons does indeed act as a deterrent, there is reason to fear that the very testing of nuclear devices for war purposes can, if continued, lead to serious danger for various forms of life on earth."¹⁶

Yet, with characteristic optimism, Pope John believed that total disarmament could be achieved and exhorted all world leaders to continue the "immense task" of securing peace around the globe.¹⁷

"Opening to the Left" and Cold War Nuclear Diplomacy

But *Pacem in Terris*, was not simply a plea for peace; it also contained passages that seemed to display a conciliatory attitude toward Communism. This was a complete reversal of policy for the Roman Catholic Church since atheistic Communism had a long history of persecuting Catholics, and the Church had an equally long history of condemning Communism. Though the encyclical never mentioned "Communism," "Marxism," or "Socialism" by name, it nevertheless alluded to those philosophies and treated them sympathetically:

Opening to the Left (Communist Conciliation):

...It is perfectly legitimate to make a clear distinction between a false philosophy of the nature, origin and purpose of men and the world [i.e. Communism] and economic, social, cultural and political undertakings, even when such undertakings draw their inspiration from that philosophy... Besides, who can deny the possible existence of good and commendable elements in these undertakings?¹⁸

With his so-called "opening to the left," Pope John was essentially opening the door for Catholics to negotiate with Communists. Even before the encyclical's release, Pope John and Khrushchev had maneuvered to affect a new rapprochement between Catholicism and Communism. In September 1961, Khrushchev had publicly applauded the Pope's appeals for East-West negotiations and later that year, he sent friendly birthday and New Year's telegrams to the pontiff. In return, the Pope invited two Russian Orthodox clergymen to the Vatican in October 1962, the first formal contact between the churches since the 11th century. In February 1963, Khrushchev responded by releasing Ukrainian

¹⁷ Ibid., paragraph 163.

¹⁵ Ibid., paragraphs 128, 111.16 Ibid.

¹⁸ Ibid., paragraphs 158-160., my emphasis.

Archbishop Josef Slipvi, who had spent 18 years in a Siberian prison. Finally in March 1963, Pope John received Khrushchev's daughter and son-in-law in a private audience; it was the first papal audience ever given to leading communists.¹⁹

Despite the nervousness of conservative Catholics, Pope John's new strategy of openness toward Communism had advantages for the Church. Pope John believed that a thaw with Communism might allow the Vatican to gain more information about the actual state of the Church behind the Iron Curtain. In places like Hungary, Czechoslovakia, and Poland, the Vatican was unsure if some its clergy were alive, imprisoned, or dead. A Catholic rapprochement with Communism might also ameliorate some of the religious persecution happening in eastern and central Europe, and secure the release of even more Catholic political prisoners. But most importantly, Pope John knew that an open dialogue with Communist leaders was necessary in order to advance the cause of world peace.²⁰

Khrushchev's Reaction and What He Had To Gain

With its conciliatory language, *Pacem in Terris* received unprecedented coverage in the state-run news outlets of the Communist bloc with excerpts printed in TASS, Izvestia and other papers.²¹ But what did Khrushchev and the Communist bloc have to gain by a rapprochement with the Catholic Church? Khrushchev's predecessor Joseph Stalin certainly believed there was no reason to fear or court the Vatican; he once sarcastically asked: "And how many [army] divisions does the Pope have?" But Khrushchev recognized that the Pope commanded a kind of "spiritual army," including 50 million Roman Catholics living in Eastern Europe, the majority of whom opposed the religious persecution of their atheist regimes.²² Plus, as third world countries in Africa, Latin America, and Asia emerged from colonialism and formed fledgling nations, their allegiances were up for grabs. Perhaps Khrushchev thought that improved relations with the Catholic Church could enhance the Communist image around the world, especially in Latin America, where the majority of citizens were Catholic. 23 As New York Times columnist, C. L. Sulzberger wrote: "Khrushchev is shrewd enough to realize the enormous force of the Catholic organization and its importance in easing East-West tensions."24

¹⁹ "Peace Encyclical Wins Red Cheers." New York Times. 13 April 1963, p. 3.

²⁰ Flamini, 15-16.

²¹ Soviet reactions were summarized in "The Church in the World: News and Notes from All Parts," The Tablet 217, no. 6414 (27 April 1963), p. 464.

²² C. L. Sulzberger, "Foreign Affairs," *New York Times* (13 April 1963).
²³ "Kremlin and Vatican," *New York Times*, 11 March 1963, p. 13.

²⁴ Sulzberger.

About a week and a half after the encyclical's release, Khrushchev himself commented on *Pacem in Terris* in an interview with an Italian newspaper:

We applaud the position of Pope John XXIII in favor of peace...

...We Communists do not accept any religious concepts, but at the same time we believe that in the interest of the safeguarding of peace it may be necessary to unite all forces.

...I am not a theologist, but as far as I remember according to the gospels Jesus Christ preached peace and not war. And all those who consider themselves believers, must feel bound not to build atomic bombs, missiles, planes, cannons and other arms for the extermination of men, but to work for peace and security of peoples.

Men of goodwill must...unite their efforts in the fight for a stable and universal peace and for general disarmament.²⁵

Kennedy's Reaction and What He Had To Gain

The U.S. government must have been terribly concerned about these developments between the Kremlin and the Vatican. Though the United States had never had formalized diplomatic relations with the Vatican, at least it had been able to count on its staunch condemnation of Communism. Now with signs of a Catholic-Communist rapprochement, the U.S. was losing a virtual ally. Like Khrushchev, Kennedy also knew that the Catholic Church could wield great influence on its 500 million faithful around the world, and the President had fought hard for the allegiance of developing nations through the Peace Corps and the Organization of American States. Still, the Vatican's coziness with Communism was a dangerous sign.

These developments must have hit especially close to home for the first Catholic President of the United States. Despite his upbringing, Kennedy had always downplayed his personal religious views in light of the so-called "religious question." While running for President in 1960, Kennedy addressed his religion in a campaign speech:

I believe in an America where the separation of church and state is absolute--where no Catholic prelate would tell the President (should he be Catholic) how to act... I do not speak for my church on public matters--and the church does not speak for me. ²⁶

Thus, it was something of a surprise when President Kennedy commented quite positively on *Pacem in Terris*, in terms of his Catholicism:

²⁵ "Excerpts from Premier Khrushchev's Interview with Italian Newspaper Editor," *New York Times*, 22 April 1963, p. 12.

Excerpts from a campaign speech to the Greater Houston Ministerial Association, Houston, TX, 12 September 1960, in John F. Kennedy, "The Refutation of Bigotry," in "Let the Word Go Forth": The Speeches, Statements, and Writings of John F. Kennedy, 1947-1963, ed. Theodore C. Sorensen (New York: Delacorte Press, 1988).

As a Catholic I am proud of it and as an American I have learned from it. In its penetrating analysis of today's great problems...that document surely shows that on the basis of one great faith and its traditions there can be developed counsel on public affairs that is of value to all men and women of goodwill. We are learning to talk the language of progress and peace across the barriers of sect and creed.²⁷

In the months following the release of *Pacem in Terris*, the Kennedy administration was forced to change its tentative attitude toward the Vatican. Kennedy understood that he needed to get on equal diplomatic footing with Khrushchev as soon as possible and did not want to allow the Soviets to seize the moral high ground as the only superpower in consultation with the Holy See. Thus, just over a month after *Pacem in Terris* was released, the White House announced that President Kennedy would meet with Pope John XXIII during his European trip in late June 1963.²⁸ The *New York Times* remarked that "the Kennedy administration appears to have conquered a mild and brief case of diplomatic jitters about the policies of Pope John XXIII."²⁹

Limited Test Ban Treaty

Unfortunately, the meeting between Kennedy and Pope John XXIII would never happen. On June 3, 1963, the Pope died at age 81, after a battle with stomach cancer. Despite Pope John's death, his spirit continued to influence the direction of diplomacy. Only one week after Pope John's death, on June 10, 1963, President Kennedy delivered a major policy address at American University in Washington, D.C. In his speech, Kennedy announced that he, Chairman Khrushchev, and British Prime Minister MacMillan had agreed to high-level talks in Moscow toward a nuclear test ban treaty, beginning in July 1963. Furthermore, his speech echoed many of the same themes found in *Pacem in Terris* and even appropriated some of its language (see comparisons in italics, Tables 1 and 2). Kennedy said:

Total war makes no sense in an age when great powers can maintain large...nuclear forces and refuse to surrender without resort to those forces. It makes no sense in an age when a single nuclear weapon contains almost 10 times the explosive force delivered by all the Allied air forces in the Second World War. It makes no sense in an age when the deadly poisons produced by a nuclear exchange would be carried by the wind and water and soil and seed to the far corners of the globe and to generations yet unborn.³¹

²⁷ From a commencement address in celebration of Boston College's centenary, Boston, MA, 20 April 1963, in Tom Wicker, "Kennedy Praises New Encyclical," *New York Times*, 21 April 1963, p. 64.

²⁸ Tom Wicker, "Kennedy to Visit Pope Late in June," New York Times, 18 May 1963, p.1.

²⁹ Max Frankel, "The Pope and Politics," New York Times, 20 May 1963, p.2.

³⁰ John F. Kennedy, "The Strategy of Peace," in "Let the Word Go Forth": The Speeches, Statements, and Writings of John F. Kennedy, 1947-1963, ed. Theodore C. Sorensen (New York: Delacorte Press, 1988), 289.

³¹ Commencement address at American University, Washington, D.C., 10 June 1963 in Ibid., 284-285.

Table 1: Comparing *Pacem in Terris* with Kennedy's American Univ. Address: On the senselessness of nuclear war

Pope John XXIII	President John F. Kennedy
Pacem In Terris (April 11, 1963)	American Univ. Address (June 10, 1963)
Thus, in this age which boasts of its atomic power, it no longer makes sense to maintain that war is a fit instrument with which to repair the violation of justice.	Total war makes no sense in an age when great powers can maintain largenuclear forces and refuse to surrender without resort to those forces. It makes no sense in an age when a single nuclear weapon contains almost 10 times the explosive force delivered by all the Allied air forces in the Second World War. It makes no sense in an age when the deadly poisons produced by a nuclear exchange would be carried by the wind and water and soil and seed to the far corners of the globe and to generations yet unborn.

Then, Kennedy turned from nuclear weapons, and addressed relations with the Soviet Union in language strikingly similar to Pope John's "opening to the left":

Let us reexamine our attitude toward the Soviet Union...No government or social system is so evil that its people must be considered as lacking in virtue...Among the many traits the peoples of our two countries have in common, none is stronger than our mutual abhorrence of war."³²

Table 2: Comparing *Pacem in Terris* with Kennedy's American Univ. Address: The "Opening to the Left," i.e. Communist Conciliation

Pope John XXIII	President John F. Kennedy
Pacem In Terris (April 11, 1963)	American Univ. Address (June 10, 1963)
It is perfectly legitimate to make a clear distinction between a false philosophy of the nature, origin and purpose of men and the world [i.e. Communism] and economic, social, cultural and political undertakings, even when such undertakings draw their inspiration from that philosophy Besides, who can deny the possible existence of good and commendable elements in these undertakings?	Let us reexamine our attitude toward the Soviet UnionNo government or social system is so evil that its people must be considered as lacking in virtueAmong the many traits the peoples of our two countries have in common, none is stronger than our mutual abhorrence of war."

³² Ibid.

Sensing the connection, a *New York Times* editorial wondered, "Is it too fanciful to see the ideas of Pope John in those passages of President Kennedy's speech?"³³

Kennedy's American University address was extremely well-received by the Soviets and had the effect of clearing the air. Khrushchev himself even remarked that it was "the best speech by any President since Roosevelt." Encouraged by a new spirit of conciliation, the superpowers did in fact enter into a new, if temporary state of détente over the next few months. On June 20, 1963, the United States and Soviet Union entered into an agreement establishing a direct telephone "hotline" between Khrushchev and Kennedy. More significantly, the superpowers achieved a real breakthrough with the ensuing Test Ban negotiations.

Many peace activists supported a test ban, including the Federation of American Scientists, who argued that such a ban would "reduce the speed of the present arms race, inhibit the spread of nuclear weapons to non-nuclear powers, reduce the likelihood of nuclear war, and prevent the extension of the hazards of fallout." However, previous talks concerning a test ban had been conducted since 1955 with little progress. In fact, the Geneva Conference on the Discontinuance of Nuclear Weapons Tests had been in almost continuous session from October 1958 through January 1962 – over 3 years of negotiations with no results.

In contrast, the negotiations following Kennedy's speech proceeded quickly, beginning on July 15, 1963 and concluding only ten days later.³⁶ The treaty - signed initially by the United States, Soviet Union, and Great Britain, and later by many other countries - forbid indefinitely, all nuclear weapons tests "in the atmosphere...outer space...or under water."³⁷ It was the very first agreement which placed limits on nuclear weapons technology.

In the midst of the negotiations, President Kennedy jokingly acknowledged the late Pope's contribution in bringing the superpowers together. At a dinner roast for journalists in July 1963, Kennedy delivered a quip reminiscent of the Cuban Missile Crisis, remarking: "We are now eyeball-to-eyeball across the Holy See." 38

^{33 &}quot;New Hope for a Test Ban," New York Times, 11 June 1963, p. 36.

³⁴ As quoted in Theodore C. Sorensen, *Kennedy* (New York: Harper & Row, 1965), 733.

³⁵ Bernard Feld et al., "A Letter on the Test Ban," *Newsletter of the Federation of American Scientists* 16, no. 5 (May 1963).

³⁶ United States Arms Control and Disarmament, *Arms Control and Disarmament Agreement* (New Brunswick, NJ: Transaction Books, 1984), 34-40.

³⁷ Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and Underwater, in Ibid., 41. ³⁸ "Eyes on the Church," *America* 109, no. 2 (13 July 1963), p. 39. Kennedy's quip alluded to a statement attributed to Secretary of State Dean Rusk near the conclusion of the Cuban Missile Crisis: "We've been eyeball to eyeball and the other fellow just blinked."

Hintz 12

Conclusion

I have described Pope John XXIII's little known, but important role in materially influencing the direction of nuclear weapons diplomacy. The qualitatively new dangers posed by the atomic age led Pope John to challenge fifteen centuries of Christian just war theory and adopt a new theology of pacifism. His encyclical *Pacem in Terris* announced the Catholic Church as a new participant in the broader political discourse on nuclear weapons and also marked a significant reversal in Catholic attitudes toward Communism. John XXIII's so-called "opening to the left" and astute political maneuvering with Khrushchev helped ease Catholic persecution in Eastern and Central Europe, while gaining a new Communist audience for his views on disarmament. In turn, the Pope's new rapprochement with Communism led Kennedy to reconsider his political nervousness over the so-called "religious question" and to engage with the Vatican. Though politically neutral, Pope John XXIII represented a large and worldwide flock and his theology of peace cut across the ideologies of the superpowers. Thus, both Khrushchev and Kennedy recognized the political advantages of entering into conversation with the Vatican and - in the case of Kennedy's American University address - they even adopted some of the Pope's own rhetoric. Though certainly not the only factors leading to détente, *Pacem in Terris* and the Pope's diplomacy served as touchstones from which the superpowers embarked on a thaw in the Cold War. With the resulting Limited Test Ban Treaty, the superpowers put the first limits on nuclear weapons, and thus, in an indirect, but important way, Pope John XXIII helped alter the trajectory of a most dangerous technology.

Finally, this case study shows the variety of different social, political, and even <u>religious</u> forces which combine to influence the historical evolution of technologies. Furthermore, this analysis suggests that historians of technology should expand their methodological repertoires to include the influence of religion in the social shaping of technologies.