

The Cold War Politics of Genetic Research

Introduction

On August, 7, 1948 at the end of week long session of the Lenin All-Union Academy of Sciences (VASKhNIL) at the Ministry of Agriculture in Moscow, Trofim D. Lysenko declared that he had the support of the Central Committee for his Michurinist theory in biology.¹ Genetics was denounced as a pseudo-scientific doctrine that had provided the scientific rationale for racism, colonization and Nazi eugenics. In response, prominent Soviet geneticists recanted their belief in the “gene theory.” In the aftermath, Lysenko wielded absolute authority in Soviet biology to promote his agricultural techniques, premised primarily upon belief in “Lamarckism,” or the inheritance of acquired characteristics.² The losses to Soviet agriculture resulting from just one of his initiatives—the “cluster planting of trees,” based in the idea that the trees would cooperate, rather than compete, for light and nourishment—has been calculated as a billion rubles.³

Lysenko’s impact upon Soviet biology has been well-documented, however few scholars have yet examined what took place outside of the Soviet Union.⁴ The effective ban on genetic

¹ Ivan Michurin (1855-1935) was a plant breeder celebrated by the Bolsheviks as a model “peasant scientist.” Lysenko claimed his legacy as a way of gaining credibility. For a description of Michurin’s background see Joravsky, *The Lysenko Affair*, 40-54.

² The possibility that evolution takes place according to a process whereby living organisms develop features in direct response to the conditions of their environment, which are then inherited by their offspring, had been widely accepted until the “modern” or “evolutionary” synthesis of genetics and natural selection in the early 1940s. See Julian Huxley’s *Evolution, The Modern Synthesis* (New York, London: Harper and Brothers, 1943), as well as comprehensive accounts of the history of classical genetics such as Elof Axel Carlson, *Mendel’s Legacy: The Origin of Classical Genetics* (Cold Spring Harbor, NY: Cold Spring Harbor Press, 2004).

³ Zhores Medvedev, *The Rise and Fall of T.D. Lysenko*, trans. I. Michael Lerner (New York: Doubleday and Co., 1971), 167.

⁴ Comprehensive accounts of the Lysenko affair include: Conway Zirkle, *Death of a Science in Russia* (Philadelphia, PA: University of Pennsylvania Press, 1949); Julian Huxley, *Heredity East and West: Lysenko and World Science* (New York: Henry Shuman, 1949).; Medvedev, *The Rise and Fall of T.D. Lysenko*; Mark Adams, “Genetics and the Soviet Scientific Community, 1948-1965” (Ph.D. Dissertation, Harvard University, 1972).; Loren Graham, *Science and Philosophy in the Soviet Union* (New York: Knopf, 1972).; Dominique Lecourt, *Proletarian Science? The Case of Lysenko*, trans. Ben Brewster (London: NLB, 1977); Nikolai Kremontsov, *Stalinist Science* (New Jersey: Princeton University Press, 1997).; and Nils Roll-Hansen, *The Lysenko Effect: The Politics of Science* (New York: Humanity Books, 2005). In “Lysenkoism in Europe: Export-Import of the Soviet Model,” in Michael David-Fox and Gyorgy Peteri, eds., *Academia in Upheaval: Origins, Transfers, and Transformations of the Communist Academic Regime in Russia and East Central Europe* (New York: Garland Publishing Group, 2000), 179-202, Nikolai Kremontsov referred to the fact that very little research had yet been done of Lysenkoism beyond the border of the Soviet Union. Recent publications on Lysenkoism in other countries include William deJong-Lambert, *The New Biology: Lysenkoism in Poland* (Ph.D. Dissertation, Columbia University, 2005); Jean-Pierre. “Aspects genevois de l’affaire Lyssenko (souvenirs d’un témoin).” *Gesnerus* 58 (2001): 329-338.; and Ekkehard, Höxtermann. “Klassenbiologen und Formalgenetiker: Zur Rezeption Lyssenkos unter den Biologen in der DDR.” In Wieland Berg, Sybille Gerstengarbe, Andreas Kleinert, and Benno Parthier, eds., *Vorträge und Abhandlungen zur Wissenschaftsgeschichte 1999/2000* (Halle/Saale: Deutsche Akademie der Naturforscher Leopoldina, 2.

research which followed resulted in similar mandates in other countries in the Soviet Bloc. Meanwhile in the West, criticism or support of Lysenko consisted of far more than simply the question of whether his theories had any merit. Biologists also used the opportunity to discuss larger issues concerning the use of their science to perpetuate beliefs in biological inferiority or superiority, the conflict between evolution and religion, as well as how scientific practice was understood among members of the lay community. Framing this was the question of how scientists should legitimately criticize one another, and the new pressures created by the post-World War II era. The Cold War was a period when scientists, intellectuals and academics across numerous disciplines were forced to confront a new interplay between power and knowledge.⁵ The fact that both the United States and the Soviet Union had been envisioned by their founders as “great experiments,” with the potential to improve humanity, made the pressure put upon producers of knowledge that much greater.⁶

For purposes of clarity, I will focus my discussion on three biologists—Theodosius Dobzhansky, Herman J. Muller, and Leslie Clarence Dunn—who were among the most prominent respondents to the “Lysenko affair” in the United States. Though numerous other biologists also took part in support or criticism of Lysenko, these three were among the most actively engaged over the longest period of time.⁷ Dobzhansky was a Soviet biologist who came to the United States on a Rockefeller Grant in 1927 and never returned. Muller and Dunn both visited the Soviet Union and, to varying degrees, took part in the development of genetics during the interwar period. Their experiences prior to, and in the aftermath of, Lysenko’s “purge” of genetics in the Soviet Union, demonstrates that the Lysenko affair was a controversy whose impact extended well beyond the borders of the Eastern Bloc. It raised fundamental issues concerning the political role of science and scientists on this side of the Iron Curtain as well.⁸

⁵ Christopher Simpson ed., *Universities and Empire: Money and Politics in the Social Sciences During the Cold War* (New York: The New Press, 1998), xi.; Jessica Wang, *American Science in an Age of Anxiety* (Chapel Hill, NC: University of North Carolina Press, 1999).

⁶ Odd Arne Westad, *The Global Cold War* (Cambridge: Cambridge University Press, 2007), 39.

⁷ Other important figures in the United States and Great Britain include J.B.S. Haldane, Conway Zirkle and Julian Huxley, and to a lesser degree Milislav Demerec, Karl Sax, Robert Cook, Tracy Sonneborn, Francis Crew, C.D. Darlington, James Fyfe and Salvador Luria.

⁸ I recognize that the term “iron curtain” may be seen as problematic, [see for example, Yale Richmond, *Cultural Exchange and the Cold War: Raising the Iron Curtain* (University Park: Pennsylvania State Press, 2003).], however I use it here to refer to the political conditions as they were widely characterized during the period.

Part I: Dobzhansky, Dunn, Muller and the Rise of T.D. Lysenko

Theodosius Dobzhansky was born in Nemirov, a small town in Western Ukraine, on January 25, 1900, about a year after Lysenko.⁹ He graduated high school in 1917, just after the February Revolution. He attended the University of Kiev, where conditions became increasingly chaotic as Europe reacted to the revolution in Russia and the outcome of the First World War. The city changed hands numerous times between Bolshevik, German and Polish forces during the next few years and Dobzhansky completed his degree amidst tremendous upheaval.¹⁰

Once the turmoil was over, Dobzhansky became an instructor at an agricultural institute near Kiev where Lysenko was a student. Dobzhansky also read an account of the work of the work being done by T.H. Morgan and his students at Columbia University in the United States.¹¹ The more he understood the importance of Morgan's work, the more he became interested in pursuing genetics. The perceptions of his colleagues at the institute however, were quite different. One colleague, Professor Votchal, referred to genetics as a "passing fad" and advised Dobzhansky not to waste his time engaged in something so "intellectually perverse." In his oral history memoirs Dobzhansky would later recount that "Lysenko regarded Votchal as a great scientist and doubtless took his words for revelation from on high." Dobzhansky also remembered that Votchal kept three books on his desk at all times: one by Aristotle, one by Darwin, and one by Votchal.¹²

Dobzhansky made periodic pilgrimages to Moscow and Petrograd to read books that leading Russian geneticist, Nikolai Vavilov, brought back from the West. Dobzhansky wanted to work with *Drosophila melanogaster*—the fruit flies, that were the focus of research in Morgan's lab. After publishing the results of work he'd done with *Drosophila* samples in Moscow, he received an offer in Petrograd where he was able to work more closely with Vavilov. In 1927 he received a Rockefeller grant to conduct research at Morgan's lab and never returned to the Soviet Union.¹³

⁹ This date is according to the Georgian calendar. By the Julian calendar he was born January 12. Sophia Dobzhansky Coe, "Theodosius Dobzhansky: A Family Story." In Mark B. Adams ed., *The Evolution of Theodosius Dobzhansky* (Princeton, NJ: Princeton University Press, 1994), 13.

¹⁰ The Reminiscences of Theodosius Dobzhansky, 25-47. Oral History Research Office. Columbia University, 1962.

¹¹ An excellent account is Robert H. Kohler, *Lords of the Fly: Drosophila Genetics and the Experimental Life* (Chicago, IL: University of Chicago Press, 1994).

¹² Reminiscences of Theodosius Dobzhansky, 5, 135-136.

¹³ Reminiscences of Theodosius Dobzhansky, 5, 135-136.

1927 was also the year Leslie Clarence Dunn first visited the Soviet Union, on behalf of the Rockefeller Foundation. He had co-written a textbook, *Principles of Genetics*, which was already widely used, and later translated into Russian.¹⁴ Dunn arrived just in time for the tenth anniversary of the October Revolution, and the romantic impression he formed of Soviet socialism never left him. Dunn later recounted that Soviet science had a “revolutionary tinge”: “Whereas Westerners were inclined to go in through the traditional front door, our Soviet colleagues seemed at times to break in through the back door or even to come up through the floor.”¹⁵ Dunn met Vavilov in Moscow and got to know him well. He believed Vavilov led the charmed life of a tightrope walker—“he got things done, and his voice was heard, and he was paid attention to.”¹⁶

This perspective was matched by Dunn’s social activism in the United States. As early as 1929 the “What Is Going On This Week” section of the *New York Times* advertised Professor L.C. Dunn of Columbia University giving a lecture on “Recent Advances in Genetics” at the American Museum of Natural History. He spoke out frequently against the use of genetics to rationalize prejudice against blacks and Jews, and wrote: “One of the best services that a biologist of long experience can render his fellow-citizens is to tell them in language which they can understand what he thinks of the human species.”¹⁷ In 1933 Dunn served on the executive committee of the Emergency Committee in Aid of Displaced German Scholars. He was also a founding member of the National Council of American-Soviet Friendship and later became president of the American-Soviet Science Society.

Dunn was born in 1893 in Buffalo, New York. He conducted his graduate work at Harvard University where he studied genetics and also became involved in the eugenics movement.¹⁸ As he later remembered: “One was aware at that time of a lot of idiocies and imbecilities where inheritance played some role, and one thought more, in those times, of what was then called the social burden of the unfit.”¹⁹ Dunn, however, soon became skeptical, not

¹⁴ The Reminiscences of L.C. Dunn, 136-139. Oral History Research Office. Columbia University, 1961.

¹⁵ Dunn in Zirkle, Ed. *Death of a Science in Russia*, 51.

¹⁶ The Reminiscences of L.C. Dunn, 165-172. Oral History Research Office. Columbia University, 1961.

¹⁷ “What is Going on This Week,” *New York Times*, March 10, 1929; “Practical Biologist,” *New York Times*, March 19, 1944.

¹⁸ Comprehensive histories of eugenics include Daniel Kevles, *In the Name of Eugenics: Genetics and the Uses of Human Heredity* (New York: Knopf, 1985), and Elof Axel Carlson, *Unfit: A History of a Bad Idea* (Cold Spring Harbor, NY: Cold Spring Harbor Press, 2001).

¹⁹ The Reminiscences of L.C. Dunn, 42-43,. Oral History Research Office. Columbia University, 1961.

only of the flimsy data upon which many eugenic studies were based, but also by the obvious racial and social prejudices of the movement's most enthusiastic members. Dunn married in 1918 and his oldest son Steven was born with cerebral palsy.²⁰ It is likely that this personal detail, as well as his liberal politics, later played an important role in his response to Lysenko.

If Dunn's perspective on the Lysenko affair was in part influenced by a brief, positive visit to the Soviet Union, and his skepticism of eugenics, Herman J. Muller was his opposite. Muller was a life-long advocate for eugenics, was also initially enchanted with the Soviet Union. He helped found genetic research by bringing the first samples of *Drosophila melanogaster* in 1922, and then returned for several years in the 1930s. His experiences during his second visit, however, later made him an ardent anti-communist. As his biographer, Elof Axel Carlson would later say, Muller was "burned" by his encounters with Stalin and Lysenko, and his attitude became "better dead than red."²¹

Muller also studied under T.H. Morgan at Columbia where he developed a strong interest in eugenics. Muller's simultaneously burgeoning interest in socialism made him suspicious of the elitism with which eugenics was associated. But he also believed the "deformed" and "retarded" represented a genetic problem science should be allowed to solve.²² In 1916, as a professor at the William Marsh Rice Institute (later re-named Rice University) in Texas, he was asked to give a public lecture on biology and evolution. He warned his audience that in the past, natural selection eliminated inferior members of the human race by disease, war and famine. The advancement of civilization however, meant those who would have died off were now supported and able to live. Even worse, the shiftless and less intelligent tend to breed at a higher rate. Some audience members later complained about Muller's lecture, not because of what he'd said about eugenics, but because he'd endorsed evolution.²³ Muller's fears of an "anti-evolutionary trend" he believed to be sweeping the nation were confirmed in 1925 by the "Monkey Trial" in Dayton Tennessee.

Muller thought that the Soviet Union was the ideal location for implementing a eugenics policy because artificial class barriers had been demolished. In 1920 Muller began teaching at

²⁰ Ibid.; Melina Gormley. *Geneticist L.C. Dunn: Politics, Activism and Community* (Ph.D. Dissertation. Oregon State, 2006), 100.

²¹ Elof Axel Carlson. Lecture. New York, NY. June 10, 2005.; Muller's FBI files contain numerous documents emphasizing that by the 1950s he believed the Soviet Union was even a greater threat "civilization" than atomic warfare.

²² Carlson, *Genes, Radiation and Society*, 34.

²³ Carlson, *Genes, Radiation and Society*, 103-105.

the University of Texas at Austin. In Austin he became involved with the underground National Student League, an illegal leftist organization and came under investigation by the FBI. Fortunately in 1932 he received a Guggenheim which enabled to him to leave the United States to work at the Kaiser Wilhelm Institute for Brain Research in Berlin.²⁴

Before he left Muller attended the International Genetics Congress in New York City where he came out as a socialist. The *New York Times* quoted a speech where Muller said that “slums in our cities constitute veritable factories for the production of criminality among those who happen to be born in them, whether their parents were of the criminal class or not ... Under these circumstances it is society, not the individual, which is the real criminal, and which stands to be judged.”²⁵

In Berlin Muller witnessed Hitler’s rise to power. He decided to relocate to the Soviet Union, at the invitation of Nikolai Vavilov, in 1933. Muller arrived a hero. The speech he’d given at the International Eugenics Congress in New York was translated and reprinted widely, and the Russian Academy of Sciences granted him, for the first time, the freedom of a full-time research position. Muller published articles in popular magazines praising the collective farms and support for science he saw around him. He contrasted these conditions with the United States where academics were losing their jobs and funding for scientific research had become even scantier during the Great Depression.²⁶ Muller also sought to portray genetics as the true Marxist science in biology, and criticized the still-popular Lamarckist approach to the study of evolution. Soviet Lamarckists referred to Engels’ thesis on the importance of the transmission of characteristics acquired through labor in the transformation of ape into man.²⁷

In 1934 Muller’s research team moved to Moscow, and in 1935 Nikolai Vavilov was removed from his position as President of the Lenin All-Union Academy of Agricultural Sciences. Until then the Soviet Union had been second only to the United States in genetic research, but Lysenko’s appointment as a member of the Lenin All-Union academy that same year was among the indicators that this was about to change. By this time thousands of collective

²⁴ Carlson, *Genes, Radiation, and Society*, 173-178.

²⁵ “Holds Capitalism Bars Eugenic Goal,” *New York Times*, Aug 24, 1932: 8.

²⁶ Carlson, *Genes, Radiation and Society*, 194.

²⁷ Medvedev, *Rise and Fall of T.D. Lysenko*, 8.

farms had been forced to adopt Lysenko's methods, as he swept aside suspicions they might not be useful with accusations of sabotage. Stalin, meanwhile, offered enthusiastic public support.²⁸

Vavilov had initially placated Lysenko, believing Soviet science was a realm large enough to accommodate all points of view. He understood Lysenko as an angry species, who walked by faith, not by sight, and said that all progress in the world had been made by angry men.²⁹ But now Lysenko and his followers accused Vavilov of inexcusable delays. When asked what genetics had to offer to increase agricultural productivity Vavilov referred to the time required to select better varieties.³⁰ Lysenko, meanwhile, described a transformation of nature based upon the ability of any species to adapt and survive in any environment. Vavilov made the mistake of appointing Lysenko to the organizing committee of the International Genetics Congress scheduled to be held in Moscow in 1937. The Congress was cancelled and a year later Lysenko replaced Vavilov as the President of the Academy.³¹

In May, 1936, Muller had sent Stalin a copy of a book he'd written on eugenics, *Out of the Night*. He enclosed a letter explaining that artificial insemination using the reproductive material of the most superior would ensure the triumph of socialism. After twenty years results would be noticeable, and if capitalism still existed beyond Soviet borders, "this vital wealth in our youthful cadres, already strong through social and environmental means, but then supplemented even by the means of genetics, could not fail to be of very considerable advantage to our side." Muller soon learned that Stalin was not happy with what he'd read and was ordering the book to be attacked. All reviews to be published in the press were brought to a halt, awaiting further word. The secretary who'd translated the manuscript into Russian was reportedly later arrested and shot.³²

In August, the Great Terror began. Though beliefs that Lysenko had a line to the secret police and could have his enemies eliminated were later proved false, the ratio of repression is clear: all of the important allies of genetics were eliminated.³³ In December, a public discussion was held on "issues of genetics," attended by three-thousand academics and collective farm

²⁸ Medvedev, *Rise and Fall of T.D. Lysenko*, 17.

²⁹ S.C. Harland in "The Lysenko Controversy: Four Scientists give their points of view," *The Listener* December 9, 1948: 873.

³⁰ Carlson, *Genes, Radiation and Society*, 225.

³¹ Krementsov, *Stalinist Science*, 59, 61.

³² Mark Adams, ed., *The Wellborn Science: Eugenics in German, France, Brazil and Russia* (Oxford: Oxford University Press, 1990), 195-197.

³³ Krementsov, *Stalinist Science*, 57, 61.

representatives. Muller, Vavilov, Lysenko and their allies debated one another in an exchange marked by personal attacks and accusations of fascism and anti-Darwinism. Lysenko argued that genes were imaginary, while Muller argued that if environmental conditions completely determined evolution the Bolshevik Revolution could never have happened: peasants and proletariats would be doomed by their poor living conditions to inferiority. Muller's speech was met with wild applause, but his remarks were omitted from the published record.³⁴ Afterward, Muller briefly left the Soviet Union to fight in the Spanish Civil War and then moved to Edinburgh, Scotland, at the invitation of British biologist Julian Huxley. Muller never returned to the Soviet Union and he never saw Vavilov again.³⁵

Theodosius Dobzhansky had followed Morgan out to Caltech in 1928. In 1936 he was invited by Leslie Clarence Dunn to give a series of lectures under the title *Genetics and the Origin of Species* at Columbia University, and was asked to stay on as a faculty member.³⁶ In December, he wrote in a letter to Dunn:

Gogol said in one of his stories that whenever the devil touches gold it becomes chips of pottery. This seems to be true in USSR, and the fate of the genetics congress is a case in point.

He noted that though Lysenko was an "old moron and madman at the same time," the leaders of the Soviet Union "are not idiots." However they had "taken council of an idiot" and Dobzhansky suggested that a group of American geneticists send a treatise to Moscow, written in "their" language, explaining how genetics was not a Nazi theory: "Muller sits there and he is probably saying it all the time, but probably many peoples there no longer believe him." Dunn agreed something describing how genetics was "not counter-revolutionary," "written in the Marxist dialect," might be just the thing.³⁷

At the time, however, Lysenko's work did not necessarily fall outside the framework of mainstream plant-breeding and physiology. It was rather his rhetoric and approach that could be

³⁴ Carlson, *Genes, Radiation, and Society*, 231.

³⁵ Raissa Berg, *Acquired Traits: Memoirs of a Geneticist From the Soviet Union* (New York: Viking, 1988), 38-40.

³⁶ The lectures were later revised and published as a book, Theodosius Dobzhansky, *Genetics and the Origin of Species* (New York: Columbia University Press, 1941).

³⁷ Correspondence, Th. Dobzhansky to L.C. Dunn, December 21, 1936. Correspondence, Th. Dobzhansky to L.C. Dunn, January 4, 1937. Correspondence, L.C. Dunn to Th. Dobzhansky, January 7, 1937. Correspondence, Th. Dobzhansky to L.C. Dunn, March 10, 1937. Correspondence, Ronald Lund to L.C. Dunn, March 19, 1937. Correspondence, L.C. Dunn to Th. Dobzhansky, March 18, 1937. B: D917 L.C. Dunn Papers. Dobzhansky, Theodosius 1936-1937. The American Philosophical Society.

regarded as unscientific.³⁸ In 1937 Lysenko was also elected to the USSR Supreme Soviet and Stalin continued to offer fervent public support. The genetics congress to have been held in Moscow was rescheduled for Edinburgh, Scotland in late August, 1939. Vavilov was elected president but the Soviet delegation was refused permission to attend. A letter arrived from him instead that he clearly hadn't written, but been forced to sign. In August, 1940 Vavilov was arrested while on a plant-collecting exhibition in the Ukraine and taken to Lubyanka prison. One file in his dossier was labeled "Genetics," and contained three volumes of documents intended to prove he favored bourgeois science and opposed Academician Lysenko. He later died in Saratov prison and was buried in a mass grave.³⁹

Vavilov's fate, as well as the situation in Soviet genetics, disappeared amid internal secrecy and censorship during the Second World War. As Muller would later write, the war made it impossible to ever learn the actual cause of death of many distinguished scientists. All that seemed sure was they lived lives of terror—imprisoned, banished or executed.⁴⁰ Lysenko, meanwhile, was awarded the Stalin Prize in 1941 and 1943.

In 1940 the president of Columbia University announced that World War II was a conflict between "beasts and human beings," and any faculty member who disagreed should resign. Dunn led a protest and the demand was quietly withdrawn.⁴¹ After Hitler betrayed Stalin Dobzhansky wrote to Dunn that he envisioned the fall of Russia and establishment of a puppet government "under Hitler's boot." He also envisioned the establishment of a fascist government in the United States. It would be bad for everybody, but for people like them, "who committed the crime of being liberals" it would be worst of all.⁴²

³⁸ G.D. Fuller, "The Theoretical Significance of Vernalization.; Vernalization and the Phasic Development of Plants," *Botanical Gazette* 97/4 (1936): 867-868.; Geo D. Fuller, "Vernalization," *Ecology* 17/2 (1936): 298-299.; D.J. Wort, "Vernalization of Marquis Wheat and Other Spring Cereals," *Botanical Gazette* 101/2 (1939): 457-481.; W.F. LoeHWing, "Photoperiodic Aspects of Phasic Development," *Science* 90/2346 (1939): 552-555.; A.E. Murneek, "Recent Advances in Physiology of Reproduction of Plants," *Science* 86/2220 (1937): 43-47.; "Abstracts of Papers Presented Before the Physiological Section of the Botanical Society of America, Atlantic City, N.J. December 28, 1936 to January 2, 1937," *American Journal of Botany* 23/10 (1936): 689.; "Brief Notices," *The Quarterly Review of Biology* 12/2 (1937): 232.; In *The Lysenko Effect* Nils Rolls-Hansen also makes the point that Lysenko's theories fit in well with current research in plant breeding and physiology during this period. See particularly chapters 5 and 6.

³⁹ The details of Vavilov's arrest, imprisonment and death come from Medvedev, *Rise and Fall of T.D. Lysenko*, 72-76, and Mark Popovsky, *The Vavilov Affair* (Hamden, CT: Archon Books, 1984): 127-129, 143, 155-156, 181-184.

⁴⁰ H.J. Muller, "The Destruction of Science in the USSR," *Saturday Review of Literature*, December 4, 1948, 15.

⁴¹ "Leslie C. Dunn, Geneticist, Dies; Fought Racial-Difference Ideas," *New York Times*, March 20, 1974: 44.

⁴² Correspondence, Th. Dobzhansky to L.C. Dunn, June 29, 1941. B: D917 L.C. Dunn Papers. Dobzhansky, Theodosius, 1940-42. The American Philosophical Society.

Once the U.S. entered the war Dunn was asked to take part in writing a pamphlet, “The Races of Mankind,” which was to have been given to military officers by the War Department to educate American soldiers against the ideology of Aryan superiority. Distribution was blocked, however, by Chairman of the House Military Committee, Representative Andrew J. May of Kentucky, who objected to men from his state being informed that blacks were not, in fact, genetically inferior.⁴³

For Dunn, Dobzhansky’s fears were in a sense realized once the war was over. In 1945 he learned that his interest in Russian science had raised suspicion at the U.S. State Department. A representative arrived on campus at Columbia asking questions about him. When he came to Dunn’s office for an interview he expressed surprise that a scientist would be so concerned about what happened in other countries. It made sense that Dunn might be interested in science and public relations—“That seems proper. But why does it have to be Russian? That’s what puzzles us.” An invitation Dunn received during the same time period to serve as the scientific attaché at the American Embassy in London was later withdrawn due to “curtailment of funds for scientific liaison work.” Six months later a professor from the University of Chicago was sent instead, and Dunn drew the obvious conclusion.⁴⁴

Part II: The Aftermath of VASKhNIL and the Challenges of Challenging Lysenko

Lysenko’s status in Soviet biology was unclear in the immediate postwar period. A month before the war ended Dobzhansky wrote to Dunn that he had heard Lysenko’s situation was “less secure” than it had been. Soviet geneticists were hoping to get out from under him and requested the help of their American colleagues—Dunn in particular. Dobzhansky told Dunn he was considered “a sort of god” to them. He also had learned that Vavilov and several other geneticists “apparently do not exist any longer.”⁴⁵

Dunn and Dobzhansky also wrote a book together, *Heredity, Race and Society*, where they addressed the question of nature vs. nurture.⁴⁶ In the book they sought to replace the anthropological definition of race—based upon visible difference—with a genetic explanation.

⁴³ “Letters to the Times,” *New York Times*, March 14, 1944: 18.

⁴⁴ The Reminiscences of L.C. Dunn, 794-797. Oral History Research Office. Columbia University, 1961.

⁴⁵ Correspondence, Th. Dobzhansky to L.C. Dunn, July 4, 1945. B: D917 L.C. Dunn Papers. Dobzhansky, Theodosius, 1943-5. The American Philosophical Society.

⁴⁶ Dunn’s recollections of how the idea for the book came about can be found in: The Reminiscences of L.C. Dunn, 870-872. Oral History Research Office. Columbia University, 1961.

Dunn and Dobzhansky pointed out that since the Nazis believed being a Jew was hereditary they had sought to exterminate them. Communism on the other hand they considered a matter of influence, something to be cured by indoctrination in a concentration camp. Dunn and Dobzhansky also wrote that to argue that one group in human society is superior to any other is as silly as arguing wasps are superior to caterpillars because it's the former that stings and lays its eggs in the latter.⁴⁷

The same year they published *Heredity, Race and Society*, Dunn and Dobzhansky also collaborated to translate and publish one of Lysenko's works, *Heredity and Its Variability*.⁴⁸ The purpose—as Dobzhansky put it—was to “let him stand on his own two feet.”⁴⁹ Dobzhansky would later say that Lysenko was foolish never to have hired a ghost writer. He was clearly not only illiterate scientifically, but literally as well: “His writings are undoubtedly actually his writings.”⁵⁰ Dobzhansky referred to Lysenko's text as “excrement,” and said the author himself was a “son-of-a-bitch: “Translating it has been one of the most unpleasant tasks I had in my whole life, and surely I would never undertake a thing like that for money—it can be done only for a ‘cause’.” If he could contribute even a little towards “unmasking this imposter,” it would be time well-spent.⁵¹ As for Dunn, he believed that putting the book into circulation and having it judged on its merits just might turn out to be the most damaging thing they could do.⁵² *Heredity and Its Variability* was published by King's Crown Press, a division of Columbia University Press, in 1946.⁵³

British biologist Julian Huxley orchestrated reviews in England while Muller and Dunn wrote letters to colleagues encouraging them with the belief that negative reviews of Lysenko's work would weaken him. Reviews of *Heredity and Its Variability* appeared in all the major biology journals. Dunn's review was published in *Science*, and the letter he wrote to the editor to

⁴⁷ L.C. Dunn and Th. Dobzhansky, *Heredity, Race and Society* (New York: Pelican Books, 1946), 11-12.

⁴⁸ In his oral history Dunn describes finding a copy in a shipment of books sent to the American-Soviet Science Society. The Reminiscences of L.C. Dunn, 747-748. Oral History Research Office. Columbia University, 1961.

⁴⁹ A parallel example in England was P.S. Hudson and R.H. Richens, *The New Genetics in the Soviet Union* (Cambridge England.: Imperial Bureau of Plant Breeding and Genetics, 1946). The authors made a comprehensive scientific review of Lysenko's claims and concluded: “Mendelian genetics is criticized by Lysenko for its failure to conform to his chosen authorities, for its claimed inconsistency with dialectical materialism, and for the supposed discrepancies between its tenets and Lysenko's experimental results.”

⁵⁰ B: D65 Dobzhansky, Theodosius. Reminiscences, Part I: 321. The American Philosophical Society.

⁵¹ Correspondence, Th. Dobzhansky to L.C. Dunn, July 31, 1945. B: D917 L.C. Dunn Papers. Dobzhansky, Theodosius, 1943-5. The American Philosophical Society.

⁵² The Reminiscences of L.C. Dunn, 748. Oral History Research Office. Columbia University, 1961.

⁵³ T.D. Lysenko, *Heredity and Its Variability*, trans. Theodosius Dobzhansky (New York: King's Crown Press, 1946).

accompany it gave no indication he'd been involved in the translation.⁵⁴ The review itself gave the same impression of complete detachment, although he did make a pointed comparison between Lysenko's theories and the conflict between biology and religion in the United States:

It seems an anachronism somewhat like the denial of the facts of evolution over large areas of a country as progressive as the USA. In both cases the causes of such attitudes seem to those outside the country to be obscure and puzzling.⁵⁵

Shortly before Dunn's review was published he received a letter from the Science Editor of the *New York Times*, Waldemar Kaempffert, asking about Lysenko and the publication of *Heredity and Its Variability*. Dunn referred Kaempffert to the reviews written by himself and Dobzhansky, and said he'd probably want to consider the motives American geneticists had for publishing Lysenko. One point of view was that Lysenko's "vague and mystical ideas" didn't deserve to be taken seriously. This was opposed by those who didn't conform to the usual attitude of scientists, that something must be understood before it could be criticized. Dunn declared himself a member of the latter group; the fact that the book might be used as a "whip by those who wish to abuse the Soviet Union," wasn't as important as the long-term service which would be done to Russian science by exposing him.⁵⁶

Meanwhile, Dunn received letters and telephone calls from college students asking for his opinion on Lysenko. He argued that Lysenko's popularity was due to the appeal of Lamarckism, and the tendency of the general public to "grasp any straw that seems to confirm their almost innate desire to have evolution interpreted in this way."⁵⁷ Some of Dunn's scientific colleagues disagreed with his analysis. Selig Hecht, a colleague at Columbia, praised his review of *Heredity and Its Variability*, but said the final paragraph had left him "cold." Equating the fundamentalist minority in the States with the situation in the USSR was unjust, since anyone who doesn't like the way biology is taught in their state can move elsewhere.⁵⁸ Another colleague, L.J. Stadler at the University of Missouri, declined Dunn's request to write a negative

⁵⁴ Correspondence, L.C. Dunn to Editor, *Science*, January 1, 1946. B: D917 L.C. Dunn Papers. Lysenko Controversy in the U.S. #2. The American Philosophical Society.

⁵⁵ *Science* 103 (1946): 180-181

⁵⁶ Correspondence, Waldemar Kaempffert to L.C. Dunn, January 29, 1947. Correspondence, L.C. Dunn to Waldemar Kaempffert, January 31, 1946. Correspondence, Waldemar Kaempffert to L.C. Dunn, February 1, 1946. Correspondence, Waldemar Kaempffert to L.C. Dunn, February 13, 1946. B: D917 L.C. Dunn Papers. Lysenko Controversy in the U.S. #2. The American Philosophical Society.; Kaempffert's review appeared in the *New York Times* as: Waldemar Kaempffert, "Man and His Milieu," *New York Times*, March 3, 1946: BR4.

⁵⁷ The Reminiscences of L.C. Dunn, 771. Oral History Research Office. Columbia University, 1961.

⁵⁸ Correspondence, Selig Hecht to Leslie Clarence Dunn. Undated. B: D917 L.C. Dunn Papers. Lysenko Controversy in the U.S. #2. The American Philosophical Society.

review of the book. Stadler pointed out that a journalist interested in “axe-grinding” could just quote whatever part of the review he wanted. Aside from using Lysenko’s book as a lesson on unscientific methods and open-mindedness, he didn’t see the value of translating him.⁵⁹

At the same time, Dunn himself disagreed with some of the reviews of the book which appeared. He wrote a letter to the *Saturday Review of Literature* objecting to one reviewer’s claims that not only did Lysenko represent the official Soviet doctrine in genetics, but that he was typical of Soviet science: “One should no more view the whole of Russian science through the lens of Lysenko than one should view American science through fundamentalist writings on evolution,” Dunn responded. However he himself was accused on the same pages of being a Soviet apologist.⁶⁰

Dobzhansky was becoming concerned with Dunn’s equivocations on Lysenko. In a letter he wrote:

Are the “methods of discourse of Lysenko’s school” justified by the fact that they live “in the midst of a society recently founded on Revolution?” Your statement that “some exponents of Mendelism were actually fascists” may be misinterpreted to mean Vavilov, although you surely do not mean anything of the kind. ... Lysenko’s power is surely granted him not by Russian peasants and workers. Peasants and workers at best found out about it post factum from the daily press.⁶¹

For time being, however, Dobzhansky said he’d heard “Lysenko’s star” was declining.⁶²

In fact Lysenko was on the verge of victory, confirmed by the events at the VASKhNIL conference in the summer of 1948.⁶³ Dobzhansky was in Brazil when he learned the news through clippings sent from *The New York Times*. He wrote to Dunn, “You can imagine what I feel”; he also quoted the Bible: “If we do not speak out then stones shall speak!” At the very

⁵⁹ Correspondence, L.C. Dunn to Dr. L.J. Stadler at University of Missouri, December 22, 1945. Dr. L.J. Stadler to L.C. Dunn, December 28, 1945. B: D917 L.C. Dunn Papers. Lysenko Controversy in the U.S. #2. The American Philosophical Society.; Ironically, three years later, Stadler would be denied permission to attend the Eighth International Congress of Genetics in Stockholm due to suspicions concerning his loyalty to the United States. The Congress was held July 7-14, ending approximately one week before the VASKhNIL conference.

⁶⁰ Correspondence, L.C. Dunn to Editor, *Saturday Review of Literature*, undated. B: D917 L.C. Dunn Papers. Lysenko Controversy in the U.S. #2. The American Philosophical Society.; “Letters to the Editor: Lysenko, Pro and Con,” *Saturday Review of Literature* March 30, 1946, 30.

⁶¹ Correspondence, Th. Dobzhansky to L.C. Dunn, October 2, 1946. B: D917 L.C. Dunn Papers. Dobzhansky, Theodosius 1946-7. The American Philosophical Society.; “Mendelism” refers to Gregor Mendel (1822-1884), whose study of pea plants established the framework for the study of genetic inheritance in early 20th century.

⁶² Correspondence, L.C. Dunn to Th. Dobzhansky, November 25, 1946. B: D917 L.C. Dunn Papers. Dobzhansky, Theodosius 1946-7. The American Philosophical Society.

⁶³ The exact details of what took place immediately prior to the conference are detailed in Kremontsov, *Stalinist Science*, 158-190.

least, he said, the “speaking” should not be done by those “habitually engaged in red-baiting”:
Pray tell me what you think. You would be the ideal man to get such a thing started.⁶⁴

Numerous stories on Lysenko’s triumph appeared in the *New York Times*, *Wall Street Journal*, *Hartford Courant*, *Los Angeles Times*, *Time* magazine and the *Washington Post*.⁶⁵ Julian Huxley and Conway Zirkle, a botanist and historian of science at the University of Pennsylvania, soon published books in response, and numerous magazines and scientific periodicals would question the implications of Lysenkoism for Soviet science in the coming years.⁶⁶

Despite Dobzhansky’s encouragement, however, Dunn’s reaction to Lysenko was not to debunk or condemn. In reply to a letter he received asking his opinion on the controversy, Dunn wrote that part of the problem was the impossibility of proving acquired characteristics are *not* inherited. This would require demonstrating a universal negative—and such disproof could only ever approach completeness. There would always exist a finite chance an exception could be found. For this reason, he said, scientists as a rule “are rather tolerant of any heresy.”⁶⁷ Dunn wrote an article, reprinted in the *Overseas News Agency* under the title, “Scientist Finds Russian Dictum on Genetics Purely Political, But Opposed to Nazi Idea,” saying as bad as Lysenko might be, the Nazi belief that “blood was all-powerful” was worse. While there was no experimental justification for Lysenko’s notion that environment was all that mattered in shaping evolution, the idea had, “never lacked friends among those in all countries to whom apparent determinism of heredity is philosophically repugnant.”⁶⁸

In the *Bulletin of the Atomic Scientists*, a journal founded in recognition of the new political and social responsibilities required by the nuclear age, Dunn wrote that Lysenko’s views were adopted because they freed Soviet agricultural workers from being bound by scientific laws they themselves did not make. It was a moral, not a scientific issue, and thus required arguments

⁶⁴ Correspondence, Th. Dobzhansky to L.C. Dunn, September 9, 1948. B: D917 L.C. Dunn Papers. Dobzhansky, Theodosius 1948-9. The American Philosophical Society.

⁶⁵ See, among numerous examples: “Lysenko Crushes Geneticists in Russia,” *New York Times*, August 19, 1948: 5.; “‘True’ Science,” *The Wall Street Journal*, August 20, 1948, p. 4.; “Repeal of Mendel,” *The Hartford Courant*, September 1, 1948, p. 10.; “The Mind of the Kremlin,” *Washington Post*, August 22, 1948, p. B4.; “Marxism as Applied to Growing Tomatoes,” *Los Angeles Times*, August 25, 1948, p. A4.; *Time*, September 6, 1948: 66.

⁶⁶ Both Huxley’s and Zirkle’s books are cited above. The latter was actually a collection of reprints of materials related to the controversy.

⁶⁷ Correspondence, L.C. Dunn to Miss Deborah Bacon, March 21 1949. B: D917 L.C. Dunn Papers. Lysenko Controversy in the U.S. The American Philosophical Society.

⁶⁸ “Scientist Finds Russian Dictum on Genetics Purely Political, But Opposed to Nazi Idea.” B: Z67 Conway Zirkle Papers. Dunn, L.C. Concerning the Lysenko Report: 4. The American Philosophical Society.

that were “hortatory and patriotic” rather than “logical and objective”: “To discuss it as an aberration is to abandon hope of understanding how, in a revolutionary state, all parts of life are connected by a political lifeline.”⁶⁹

Dobzhansky continued to have no patience with Dunn’s ambivalence. In another letter he wrote angrily that Lysenko was a “contemptible cheat” who had obtained backing for “prescientific and at best 19th century ideas”—“all else is materials for dissertations of future historians.” Lysenko was guilty of “murder,” it must be said despite the fact that it helped the arguments of those they disliked. “Any pussyfooting is in this case an insult to the memories of men murdered for being scientists”: “Let us say the truth and let the chips fall where they may”—even if it’s “inexpedient.” Anything else is like trying to convince yourself the “snow falls black in New York and turns white in a few days”:

Well, enough of this outburst—I hope that we agree on the whole, although I know you are averse from using violent language which I cannot at times avoid. And this is one of cases where I do not even want to avoid it. Violent language has a biological function to serve, and I know of nothing where this function needs more to be served than in the Lysenko case.⁷⁰

Herman J. Muller’s public attitude towards Lysenko was far more straightforward than Dunn’s. Four months after the VASKhNIL conference Muller published two articles in the *Saturday Review of Literature*.⁷¹ In the first he wrote that as far as Soviet genetics is concerned, “all that we can now hope to do is to conduct an autopsy.”⁷² In a follow-up he described Lysenkoism in terms of conflict between science and Christianity in the United States. The article included a photograph of William Jennings Bryan and Clarence Darrow, captioned: “When we criticize the Soviet attack on science, let us not forget...the assault on the teaching of evolution during the Scopes trial in Tennessee, led by the politician William Jennings Bryan.” He added that the Scopes trial was “only the most publicized” of many similar “scandals.”⁷³

Muller also pointed out the “danger” created by the dependence of science on funding from private foundations. He believed the “gravest present danger” though was the “activities of

⁶⁹ *Bulletin of the Atomic Scientists*, May (1949): 143.

⁷⁰ Correspondence, Th. Dobzhansky to L.C. Dunn, December 12, 1948. B: D917 L.C. Dunn Papers. Dobzhansky, Theodosius 1948-9. The American Philosophical Society.

⁷¹ H.J. Muller, “The Destruction of Science in the USSR,” *The Saturday Review of Literature*, December 4, 1948, 13-15, 63-65.; H.J. Muller, “Back to Barbarism Scientifically,” *The Saturday Review of Literature*, December 11, 1948, 8-10.

⁷² Muller, “The Destruction of Science in the USSR,” 13.

⁷³ Muller, “Back to Barbarism Scientifically,” 9.

super-patriots,” such as the House Un-American Activities Committee (HUAC), “who, on the plea that they are battling totalitarianism and defending democratic freedoms, are themselves attempting to fasten the very evils they warn against upon our own country.” According to Muller, it was critical to avoid a repeat of what had happened to science and scientists in Nazi Germany, and was now happening in the USSR.”⁷⁴

Of the six letters published in response to Muller’s articles, only one reader agreed with him. He was accused of “vehemence,” being “unscientific” and “emotional,” and writing a “political diatribe.” One respondent asked why criticize Lysenko since we should “welcome anything that decreases” the “ability” of the Soviet Union “to conquer us.”⁷⁵

Five months later Muller and George Bernard Shaw published back to back articles in the *Saturday Review of Literature*, presenting their opposing points of view on Lysenko.⁷⁶ Shaw defended Lysenko and his article dealt primarily with his contention that Lysenko was a vitalist rather than a materialist.⁷⁷ Muller’s response was polite, but he clearly believed Shaw, as a non-scientist, was not qualified to debate him. He wrote that disagreement over Lysenko’s theories would not be settled by “philosophical argument,” however “the public has not the patience to be bothered with the intricacies” of genetics.⁷⁸ To debate Lysenko would be as pointless as debating William Jennings Bryan.⁷⁹ Muller concluded by warning readers that unless they were vigilant, “the doctrine of the infallible state will eventually engulf our culture also.”⁸⁰

Shaw was not a scientist, and the *Saturday Review of Literature* was published for non-scientists. Muller was therefore vulnerable in being forced to criticize Lysenko on non-scientific grounds. A similar problem occurred when he was pitted against a fellow-scientist, Leslie Clarence Dunn, in the leftist press. In “Soviet Science is Changing Heredity,” an article published in *The Worker*, the author focused criticism on Muller as a primary figure in the “cold war against the USSR.”⁸¹ Meanwhile, Dunn’s article in the Overseas News Agency, “Scientist

⁷⁴ Ibid, 10.

⁷⁵ *Saturday Review of Literature*, January 8, 1948, 23-24.

⁷⁶ George Bernard Shaw, “Behind the Lysenko Controversy,” and H.J. Muller, “It Still Isn’t a Science: A Reply to George Bernard Shaw,” *The Saturday Review of Literature*, April 16, 1949, 10-11, 11-12, 61.

⁷⁷ Vitalism is the belief that there is more to the nature of life than scientists can understand.

⁷⁸ Ibid, 12.

⁷⁹ Muller, “Back to Barbarism Scientifically,” 9.

⁸⁰ Ibid, 61.

⁸¹ Peter Stone, “Soviet Science is Changing Heredity,” *The Worker* XIII (51), 1948, 5-6, 12.

Finds Russian Dictum on Genetics Purely Political, But Opposed to Nazi Idea,” was cited to accuse Muller of telling a “bare-faced lie.”⁸²

Muller and Dunn’s actual disagreements were more complicated. Part of the reason they were pitted against one another was that Muller had been misquoted in *Time* magazine as saying Lysenko’s theories were “almost ‘Nazi eugenics.’” In fact Muller had never actually used the term “Nazi eugenics,” however when he complained to the editors they refused to print a correction.⁸³

In a letter to Dunn, Muller confessed that though he regretted the antagonism provoked by his attacks on Lysenko, it was the right thing to do. But he was also angry with Dunn. How could he claim Lysenkoists were upholding a theory that was more “anti-Nazi” than genetics? The letter concluded amicably:

p.p.s Did you see the December 26th issue of "The Daily Worker", with its big Sunday magazine feature article, quoting you to refute me? It also attributed to me a long quotation from a non-existent work of mine.⁸⁴

Dunn responded that he had no hard feelings, but he was not inclined to declare that it was time for an “autopsy”:

Here are hard-boiled people trying to make a collective system work in an economy that is probably not yet ready for it, moved by practical, political and social and economic motives—deliberately choosing a course that will eventually lead to the ruin of Soviet agriculture. What political or other considerations will compensate for the price they must pay for Lysenko? I don't know the answer to this although I have some guesses; but I think it would be short-sighted to take the easy answer that they are all ignorant and evil men since we know that in certain other respects they have been pretty astute. But the main thing is not lose sight of the existence of this problem; and that is why I didn't think that your view that all that's possible now is an autopsy would lead to any further understanding.⁸⁵

Muller and Dunn’s views on academic freedom in the context of the Cold War were also opposed. When a chemistry professor at Oregon State, Ralph Spitzer, was dismissed for teaching Lysenko’s theories in his classroom, Muller was unsympathetic: If Spitzer was a communist then

⁸² Ibid, 6.

⁸³ Correspondence, H.J. Muller to Leslie Clarence Dunn, January 17, 1949. B: D917 L.C. Dunn Papers. Lysenko Controversy in the U.S. #4. The American Philosophical Society.

⁸⁴ Correspondence, L.C. Dunn to H.J. Muller, February 17, 1949. B: D917 L.C. Dunn Papers. Lysenko Controversy in the U.S. #1.

⁸⁵ Correspondence, H.J. Muller to Leslie Clarence Dunn, January 17, 1949. B: D917 L.C. Dunn Papers. Lysenko Controversy in the U.S. #4. The American Philosophical Society.

he should be fired.⁸⁶ However, when the president of the University of Washington dismissed three faculty members for being members of the Communist Party, Dunn wrote a letter saying what he'd done constituted a "shocking repudiation" of democracy and academic freedom."⁸⁷ In the meanwhile, the pressure on Dunn himself was growing stronger. The members of his department at Columbia were turning against him and he began to consider leaving academia and ceasing research.⁸⁸ The same month Spitzer was dismissed from Oregon State, Dobzhansky wrote a letter to Dunn encouraging him that he was a leader among scientists:

To be sure, your political views make you out of tune with the present trend. But isn't this still more of a reason to go on?⁸⁹

In May, 1950, less than two years after the VASKhNIL conference, both Muller and Dunn received letters from Jeanne Coyne Mossige at the University of Oslo informing them of a very odd presentation given by an ardent follower of Lysenko's, Professor Vsevolod Stoletov.⁹⁰ Stoletov was part of an official Soviet delegation for Norwegian-Soviet Friendship Week, and he was invited by biologists at the university to give an informal discussion. According to the account given to Muller and Dunn, Stoletov, (accompanied by two men who remained silent throughout the meeting), defended Soviet biology. He was, however, vague on details and responded to specific questions by simply changing the subject. At one point he claimed that a "Mendel-Morganist" had told him that if Frederick the Great had been aware of modern genetics he would have bred a race of giant soldiers. When he was asked who had told him that he was again evasive, but finally reluctantly replied: "Muller." Then, apropos of nothing, he asked whether or not Muller still believed acquired characteristics were not inherited. To the audience the question seemed strikingly naïve, and they assured him that no, Muller had definitely not changed his mind. Mossige wrote:

It was a funny question and my personal interpretation of his reason for asking it is that it was a kind of silent prayer on his part such as "Dear God let Muller still

⁸⁶ Carlson, *Genes, Radiation, and Society*, 331.

⁸⁷ "University Urged to Rescind Ouster," *New York Times*, March 1, 1949: 14.

⁸⁸ B: D65 pt. 2 Dobzhansky on Dunn. Dobzhansky, Theodosius. *Reminiscences, Part II*: 467. The American Philosophical Society.

⁸⁹ Correspondence, Th. Dobzhansky to L.C. Dunn, February 3, 1949. B: D917 L.C. Dunn Papers. Dobzhansky, Theodosius 1948-9. The American Philosophical Society.

⁹⁰ Correspondence, Jeanne Coyne Mossige to L.C. Dunn, May 14, 1950. Correspondence, Jeanne Coyne Mossige to Muller dated Oslo, May 15, 1950. B: Z67 Conway Zirkle Papers. Mossige, Jeanne Coyne. The American Philosophical Society. L.C. Dunn first got to know Jeanne Coyne in the early 1930s when she came to work with him as a student at Columbia. Dunn left for a 15 month sabbatical in Oslo, Norway in 1933 and she soon joined him as an assistant. She married and never returned to the States. *The Reminiscences of L.C. Dunn*, 460-466. Oral History Research Office. Columbia University, 1961.

believe so that I can believe.”⁹¹

Mossige also indicated Stoletov had never, throughout the whole meeting, mentioned Lysenko’s name—not even once. When someone asked him a question about Lysenko, he just skipped it. She looked at the letters again the next day and added a postscript:

I've read this over and the reading of my own words gives me an entirely different impression than did the personal contact with the man. While he was talking he seemed absolutely earnest and sincere; when I reread all this it strikes me that he must have realized how stupid it all was and that his evasions to direct questions were not because he did not know or did not remember but because he knew the standard answers would not be acceptable to us on any basis and he didn't want to appear too much of a fool. He seemed intelligent, very calm and collected and sure of himself, but I suppose his whole presentation, and especially the title "Guiding Principles of Soviet Genetics" was another way of saying "This is my story and I'm stuck with it."⁹²

Conclusion

If Lysenko’s theories were indeed the “story” Stoletov was “stuck with,” they wouldn’t be for much longer. By 1952 it was rumored Stalin had grown dissatisfied with Lysenko, and in December two articles openly critical of him appeared in an important Soviet biology publication, *Botanical Journal*.⁹³ The month before Stalin’s death on March 5, 1953, the period of classical genetics ended as Watson and Crick published their paper on the double helix structure of DNA. Meanwhile, more evidence portraying Lysenko’s experiments and those of his followers as fraudulent quickly followed, and when Khrushchev took power his initial attitude towards Lysenko was not supportive.⁹⁴

A few days after Stalin died the State Department decided not to renew Leslie Clarence Dunn’s passport due to the “direction,” “domination” and “control” they believed to be exercised over him by the Communist Party.⁹⁵ Dunn wrote to the Secretary of State that his beliefs were no

⁹¹ Mossige to Muller, May 15, 1950.

⁹² Correspondence, Jeanne Coyne Mossige to L.C. Dunn, May 14, 1950. Correspondence, Jeanne Coyne Mossige to Muller dated Oslo, May 15, 1950. B: Z67 Conway Zirkle Papers. Mossige, Jeanne Coyne. *The American Philosophical Society*. L.C. Dunn first got to know Jeanne Coyne in the early 1930s when she came to work with him as a student at Columbia. Dunn left for a 15 month sabbatical in Oslo, Norway in 1933 and she soon joined him as an assistant. She married and never returned to the States. *The Reminiscences of L.C. Dunn*, 460-466. Oral History Research Office. Columbia University, 1961.

⁹³ Medvedev, *The Rise and Fall of T.D. Lysenko*, 135; Joravsky, *The Lysenko Affair*, 156, 159; Soyfer, *Lysenko and the Tragedy of Soviet Science*, 226-227.

⁹⁴ Soyfer, *Lysenko and the Tragedy of Soviet Science*, 231-232.

⁹⁵ Correspondence, Ruth Shipley to Leslie Clarence Dunn, April 9, 1953. B: D 917 L.C. Dunn Papers. Oral History Records. The American Philosophical Society.

different from communists, or members of the Supreme Court. To abandon them just because they meant he agreed with a member of the former group was contrary to reason and good sense. He also asked whether the fact that the books he'd co-authored and edited on genetics had been publicly condemned and banned in the USSR didn't indicate a lack of adherence to the Communist Party line.⁹⁶

Stalin's passing put H.J. Muller in a very good mood. That morning his secretary told him two gentlemen from the FBI had arrived to see him. They apologized for bothering him, and then served Muller a subpoena to appear before House Un-American Activities Committee.⁹⁷ Muller testified about a week later. Though it turned out the reason he'd been called was a mistake, he decided to stay and chat with the committee members.⁹⁸

"Why is it true that in our country," they asked, "that so many intellectuals seem to be attracted to or at least do identify with the communistic philosophy? Why do they do it? What is there about it that attracts a man with a university degree or two or three or four of them?"

"Well, you know they made great claims in the old days," Muller replied, "and they are still making them. Claims, although it is harder for them to prove them nowadays."

"What do you mean by the old days?"

"I mean when the Russian revolution occurred, the world was flooded by Russian propaganda literature that attracted many intellectuals."

"What year would that be?"

"Well, 1917. The first revolution was 1917 and the Communists took control in 1918, and from there they went on for some years and there was a lot of propaganda and I daresay that many of the people in the Communist movement of those days did have those aims and they did not realize how sadly it was going to be turned in the opposite direction. They fooled a lot of people, and that is still going on. It fools a lot of people in spite of the overwhelming evidence to the contrary."

"Don't you think that in 1919, when the Russians who were attracted to the Soviet system by the program were absolutely sincere in trying to bring the people a better way of life?"

"Yes."

⁹⁶ B: D 65 Dobzhansky Papers. Dunn, Leslie Clarence #1.; The Reminiscences of L.C. Dunn, 1145-1164. Oral History Research Office. Columbia University, 1961.

⁹⁷ Carlson, *Genes, Radiation, and Society*, 372-374.

⁹⁸ Muller's father-in-law had the same name as an agent for the Communist International and his was the reason for the confusion.

The committee asked Muller about what had happened in 1948: “Oh they denounced me because I denounced them,” he replied. Muller said he wished more people could actually be sent to the Soviet Union for a few years so they’d know how it is: “More of our so-called intellectual people realize the danger less than others.”

“That is it. Eggheads, I call them.” one of the committee members replied.

“What do you call them?” Muller asked.

“I call them eggheads.”

“Unfortunately, the heads are not so easily broken as eggs.”⁹⁹

That summer Dobzhansky attended a conference in Hamburg to denounce curbs on scientific freedom in totalitarian states. In his presentation Dobzhansky outlined how the Bolshevik party and the Soviet state had subjugated science to their ends. If anyone had set out to undermine Soviet agriculture they could not have done a better job than Lysenko and his associates.¹⁰⁰

One of the most prescient assessments of Lysenko’s impact came with the launch of Sputnik in October, 1957. Lysenko was accused of having lulled the United States into believing that the situation in Soviet genetics was true of every field of study. Meanwhile, McCarthyites had run roughshod over academia as the U.S. fell behind and Americans remained complacent.¹⁰¹ Khrushchev did ultimately appoint Lysenko to lead his Virgin Lands program, however Lysenko never again wielded the same influence as he had under Stalin. When Khrushchev was removed from power in 1964 Lysenko went with him.¹⁰²

Lysenko’s long-term impact upon the careers of Dobzhansky, Dunn and Muller was probably more significant than any damage done to U.S. research in rocketry. Dobzhansky would later say that old age brought Dunn disappointment from all sides. In the end his political activism had cost him his career: “I think Dunn would be in agreement if he heard me say that his very extensive social work has probably decreased his productivity as a scientist.”¹⁰³

Dobzhansky also blamed the stress Dunn experienced caring for his oldest son. Dobzhansky called Stephen Dunn a “tragic situation”: “A spastic, and a very bad spastic.”

⁹⁹ HUAC Executive Session Transcripts—RG 233. Box 2. National Archives, Washington, D.C.

¹⁰⁰ “Scientists Demand Greater Freedom,” *New York Times*, July 25, 1953, 4.; “Government Rule of Science Argued,” *New York Times*, July 26, 1953, 22.

¹⁰¹ “Party Dogma Found to Hinder Some Areas of Soviet’s Science,” *New York Times*, July 22, 1959, 1.

¹⁰² Soyfer, *Lysenko and the Tragedy of Soviet Science*, 280.

¹⁰³ B: D65 pt. 2 Dobzhansky on Dunn. Dobzhansky, Theodosius. Reminiscences, Part II: 463-464. The American Philosophical Society.

However Stephen had a genius I.Q. and ended up receiving a degree in anthropology from Columbia, despite his condition.¹⁰⁴ According to Dobzhansky, however, Stephen Dunn's predicament occupied Dunn's mind all his life—depressed him continually. The example of Stephen Dunn was “something that gives one pause,” he said. “As a matter of fact, this situation is of the kind which makes one immediately think of euthanasia.” Stephen Dunn, to Dobzhansky, was a “philosophical problem which is not easy to solve”—someone who would be better off dead but had “adjusted to his misery.”¹⁰⁵

Meanwhile Dobzhansky thrived. He received the Kimber Genetics award, a Guggenheim, honorary degrees from Columbia, Berkeley and University of Padua, a National Medal of Science and, along with three astronauts from the Apollo 9 space mission, a gold medal from the New York Museum of Natural History.¹⁰⁶ In 1972 he appeared in a film shown to a Congress of Geneticists and Selectionists in Moscow. As the film began Dobzhansky's face and name on the screen drew applause from several hundred people in the audience. Suddenly the film was shut off with the explanation that the sound system had failed. It was rescheduled for the next day, but the second time the sound track was so badly garbled that when Dobzhansky spoke it was impossible to understand him. Once his brief cameo ended the technical problems disappeared and the rest of the film was clear and comprehensible.¹⁰⁷ Dobzhansky was never allowed to return to the Soviet Union.

One salutary effect of the impact of the Sputnik launch on science in the United States is that it offered biologists the opportunity to argue for the teaching of evolution in public schools.

¹⁰⁴ Leslie Clarence Dunn accompanied his son to Italy where they did a joint-research project on a group of Jews in Rome. Stephen's anthropological data was published as his dissertation and they wrote an article on the experience for *Scientific American*. See Stephen Porter Dunn. *The Influence of Ideology on Culture Change; Two Test Cases* (Ph.D. Dissertation, Columbia University, 1959)., and Leslie C. and Stephen P. Dunn, “The Jewish Community of Rome,” *Scientific American*, March, 1957, p.p. 119-124.

¹⁰⁵ B: D65 pt. 2 Dobzhansky on Dunn. Dobzhansky, Theodosius. *Reminiscences, Part II*: 461-469. The American Philosophical Society.

¹⁰⁶ “Research Grants Made,” *New York Times*, July 13, 1959, 50.; “Academy Cites Seven for Science Work,” *New York Times*, April 28, 1958, 26.; “Guggenheim Fund Grants \$1,500,000,” *New York Times*, April 20, 1959, 23.; “Television,” *New York Times*, September 17, 1966.; “Dobzhansky Gets Degree,” *New York Times*, April 4, 1968, 12.; “Geneticist Reports Seeing Start of a New Species,” *New York Times*, March 13, 1967, 26.; “Museum Will Close for Centennial Day,” *New York Times*, April 6, 1969, 33.

¹⁰⁷ Correspondence, Professor Mel Greene to Isadore Michael Lerner, February 24, 1972. B: L 563 Lerner. Medvedev, Z.A.—Materials 1972 #1 (Jan.-Apr.). The American Philosophical Society.; “Breakdown in Moscow Blocks Film of Scientist,” *The Washington Post*, February 11, 1972.; “U.S. Critic of Lysenkoism, in Film, Stirs Soviet Parley,” *The New York Times*, February 12, 1972, 12.

Herman J. Muller played a central role in this process.¹⁰⁸ In 1958 he gave a speech at a meeting of science teachers in Indianapolis—“One Hundred Years Without Darwinism Are Enough”—which was later published in *The Humanist*. Muller pointed out that though the Scopes Trial had initially been seen as a victory for pro-evolutionary forces in the United States, they had lost the battle of public opinion. Darwinian evolution had all but disappeared from biology textbooks, while Darwin’s name was continually challenged by education boards and commissions across the country. Though Sputnik had undermined belief in U.S. superiority in the sciences, it should also serve as an occasion to realize that in biology we are ahead:¹⁰⁹

In this crucial area of biology the Russian system of absolute authoritarianism has in fact proved fatal. It has literally killed off their great leaders in genetics, deprived their rank and file geneticists of the opportunity of doing further researches along their own lines, expurgated their curricula, textbooks and periodicals of any treatments of the subject, and brought up a whole generation on totally false biological doctrines. Central to the falsehoods is the doctrine of the inheritance of acquired characteristics and its corollary, that this is the means by which evolution works.¹¹⁰

One of the great ironies of the Lysenko affair is that while genetic research was banned in the Soviet Union, Darwin was celebrated as the first to formulate a convincing materialist vision of the development of life that did not require the existence of God. Meanwhile on this side of the Iron Curtain the situation was the exact opposite: The United States led the world in genetic research but Darwinism was banned from public schools. Genetic research has thrived in Russia now for decades, while in the United States the challenged to Darwinism continues.¹¹¹ With this in mind we may agree that Dobzhansky, Dunn and Muller were right in seeing the Lysenko affair not as a phenomenon isolated to Soviet science, but rather as the outcome of the same factors determining public attitudes towards, and consequently the development of, science on this side of the Iron Curtain as well.

¹⁰⁸ See John L. Rudolph, *Scientists in the Classroom: The Cold War Reconstruction of American Science Education* (New York, NY: Palgrave, 2002), 52, 149, 150.

¹⁰⁹ Herman J. Muller, “One Hundred Years Without Darwinism Are Enough,” *The Humanist*, XIX/3 (1959): 139-149.

¹¹⁰ *Ibid*, 144-145.

¹¹¹ For current accounts of the controversy concerning Darwinian Evolution in the U.S., see Michael Ruse, *The Evolution-Creation Struggle* (Cambridge, MA: Harvard University Press, 2005).; William A. Dembski and Michael Ruse eds., *Debating Design: From Darwin to DNA* (Cambridge: Cambridge University Press, 2004).; Matt Young and Taner Edis eds., *Why Intelligent Design Fails: A Scientific Critique of the New Creationism* (New Brunswick, NJ: Rutgers University Press, 2004).; John Brockman, ed., *Intelligent Thought: Science Versus the Intelligent Design Movement* (New York: Vintage Books, 2006).; and Eugenie Scott, *Evolution vs. Creationism: An Introduction* (Berkeley, CA: University of California Press, 2005).