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THEMATIC DOSSIER
SCIENCE IN THE PRESS, RADIO AND TV: FRANCO'S REGIME AND THE POPULARIZATION OF SCIENCE

The Public Image of Soviet Science During Franco's Spain

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Abstract: During the second half of the 1950s, Spain received economic and technological assistance from the Western bloc, which encouraged a transformation of the country's socioeconomic structures. Spanish political leaders adopted a technocratic approach to increase the efficiency and economic growth of the State. However, they also aimed to normalize relations and establish commercial agreements with Eastern European countries as a form of external support for their new economic policy. After years of exploiting anti-Communism to enhance political stability, many Spaniards became suspicious of the Soviets and were convinced of the threat that their political ideology represented. To depoliticise such relations and mobilise consensus, the press developed a new rhetoric towards the Soviet Union. This had a significant impact on how scientific and technological news were presented in Spanish newspapers, particularly when reporting on the progress of the space race and nuclear physics.

Keywords: public sphere; newspapers; popular science; depoliticization; Spain

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Introduction

After World War II, Franco's dictatorial regime faced marginalization due to its alignment with the axis forces.¹ Consequently, Spain adopted an autarkic policy in the 1940s, based on protectionism and interventionism, to achieve self-sufficiency and reduce dependence on external resources.² The economic crisis resulting from the Civil War (1936-1939) had left the country in a difficult situation, both economically and politically. However, the context of the Cold War provided an opportunity for the dictatorship to improve its standing in international relations. In a world divided into two major political and economic blocs, led by the United States and the Soviet Union, the Spanish regime's anti-communism led to a gradual but effective bilateral negotiation strategy with Washington.

This ultimately resulted in breaking the political isolation and gaining recognition for the regime. The Madrid agreements of 1953 not only transformed Spain's diplomatic relations with the United States but also facilitated Spain's integration into the bloc of Western countries.³ Furthermore, the United States provided Spain with economic and technological assistance in the following years, encouraging the transformation of the country's socioeconomic structures. This was accompanied by technocratic approaches aimed at improving the efficiency and economy of the state, with a commitment to modernizing the country as a fundamental aspect of renewing the legitimacy of Franco's regime.⁴

In this context, the generation of knowledge became a strategic goal for Spanish political leaders, since it was seen as the way to ensure the foundations for economic growth and social progress. Therefore, investment in scientific and technological research received increasing attention, as it was understood as a crucial element to create modern citizens with the values to overcome traditional attitudes that hindered the progress of a developing country like Spain.⁵

¹ Florentino Portero, *Franco Aislado. La Cuestión Española (1945-1950)* (Madrid: Aguilar, 1989).

² Ángel Viñas, "Autarquía y Política Exterior en el Primer Franquismo (1939-1959)," *Revista de Estudios Internacionales* 1, no. 1 (1980): 61-92; Donato Fernández Navarrete, "La Política Económica Exterior del Franquismo: del Aislamiento a la Apertura," *Historia Contemporánea* 30 (2005): 49-78; Carlos Barciela López et al., *La España de Franco (1939-1975): Economía* (Madrid: Síntesis, 2001).

³ Enrique Moradiellos, *La España de Franco (1939-1975): Política y Sociedad* (Madrid: Síntesis, 2000); Pablo León Aguinaga, "La Historiografía Española y las Relaciones con los Estados Unidos de América: las Consecuencias del Pacto de Madrid y la Transición," *Cuadernos de Historia Contemporánea* 34 (2012): 357-370.

⁴ Antonio Canellas Mas, "La Tecnocracia Franquista: El Sentido Ideológico del Desarrollo Económico," *Studia Historica: Historia Contemporánea* 24 (2006): 257-288; Pedro Carlos González Cuevas, "La Derecha Tecnocrática," *Historia y Política* 18 (2007): 23-48; Ángeles González Fernández, "La Otra Modernización: Tecnocracia y «Mentalidad de Desarrollo» en la Península Ibérica (1959-1974)," *Historia y Política* 35 (2016): 313-339.

⁵ Lorenzo Delgado Gómez-Escalonilla, "Modernizadores y Tecnócratas. Estados Unidos Ante la Política Educativa y Científica de la España del Desarrollo," *Historia y Política* 34 (2015): 113-146. On how science and technology were implemented politically and financially during the dictatorship, see:

The United States' controlled transfer of technology impacted various areas, including the growth of the Spanish nuclear industry.⁶ One example is the 1955 cooperation agreement between the two nations for the peaceful use of nuclear energy.⁷ Indeed, Spain adopted a strategy that facilitated the industrialisation of the country in certain sectors of the economy, while the United States gained control over the Spanish nuclear program, directing it towards certain technologies and aligning it with its political interests.⁸ Nuclear development contracts may be seen, therefore, as an expression of the spheres of influence existing during the Cold War, since supply of both technology and materials was provided in exchange for political and/or economic loyalty.⁹ During the Cold War, the world market for nuclear fuel was divided along bloc lines. The Soviet Union provided enriched uranium to countries under its influence, while the United States had a near monopoly on supply to the rest of the world.¹⁰

However, in order to ensure the survival of Franco's regime, it was necessary to form wider alliances. In 1957, in response to domestic economic difficulties and widespread social unrest resulting from two decades of autarky, Franco appointed a new government dominated by technocrats to implement a substantial liberalisation of foreign trade and investment aimed at aligning Spain with the major Western economies.¹¹ Fernando María Castiella, a member of the monarchist and ultra-Catholic right but a reformist, became Spain's foreign minister and made significant efforts to normalize relations and establish trade agreements with Eastern

Antoni Malet, "Science and Power: Francoist Spain (1939–1975) as a Case Study," *Centaureus* 61, no. 1-2 (2019): 111-132.

⁶ In fact, shortly after the Americans learnt about the explosion of the Russian hydrogen bomb in 1953, they moved from a secret policy to one of controlled aid. See: José M^a Otero Navascués, "La Energía Nuclear en España, Desarrollo y Objetivos," *La Vanguardia*, 26 January, 1965, 2. On the economic, financial and business origins of atomic energy in Spain, see: María del Mar Rubio-Varas and Joseba de la Torre, eds., *The Economic History of Nuclear Energy in Spain. Governance, Business and Finance* (New York: Palgrave MacMillan, 2017).

⁷ Ana Romero de Pablos and José Manuel Sánchez Ron, *Energía Nuclear en España: de la JEN al CIEMAT* (Madrid: CIEMAT, 2001). See also: "Acuerdo de Cooperación entre Norteamérica y España para el Uso Pacífico de la Energía Atómica," *Diario de Burgos*, 8 June, 1955, 1.

⁸ The technology transfer strategy was based on a policy of cheap credits for the supply of enriched uranium to operate US reactors that were acquired under very favourable conditions. See, for instance: Peter Fischer, *Atomenergie und Staatliches Interesse. Die Anfänge der Atompolitik in der Bundesrepublik Deutschland 1949-1955* (Baden-Baden: Nomos, 1994).

⁹ David Albright, Frans Berkhout and William Walker, *World Inventory of Plutonium and Highly Enriched Uranium 1992* (Oxford: Oxford University Press - Stockholm International Peace Research Institute, 1993).

¹⁰ See, for instance: Frederik Michiel Voûte, "Perceptions of Responsibility: Urenco and the Troika's Commercial and Nonproliferation Policies in Theoretical and Historical Perspective; A narrative of policy and practice in the evolving nuclear nonproliferation regime and nuclear exports landscape" (PhD diss., Erasmus University Rotterdam, 2020).

¹¹ Charles T. Powell, "Spain's External Relations, 1898-1975," in *Democratic Spain. Reshaping External Relations in a Changing World*, ed. Richard Gillespie, Fernando Rodrigo and Jonathan Story, 11-29 (London: Routledge, 1995).

European countries.¹² As a result, Spain established trade relations with countries such as Czechoslovakia, Hungary, Poland, Yugoslavia, and the USSR during the 1950s.¹³ In the 1960s, these relationships were extended to other Eastern European countries, including the German Democratic Republic, Albania, Bulgaria, and Romania.¹⁴

Technocrats were interested in obtaining external support for their new economic policy and the USSR was an attractive market to explore—and an important ally for Spain's formal integration into international systems and institutions. Therefore, Spain slowly and gradually developed its own Ostpolitik in accordance with the détente promoted by Western countries during this period.¹⁵

Spain's trading volume with the USSR fluctuated initially but became more consistent during the second half of the 1960s.¹⁶ However, many Spaniards were suspicious of the Soviets and perceived their political ideology as a serious threat, as anti-Communism had long been used by Spanish rulers to enhance political stability in the country.¹⁷ To counter these perceptions, the Spanish regime made important efforts to depoliticize such relations and mobilized new

¹² Juan Carlos Pereira Castañares, "España y la URSS en una Europa en Transformación," *Cuadernos de Historia Contemporánea* 15 (1993): 189-206. On Castiella's performance as foreign minister, see: Marcelino Oreja Aguirre and Rafael Sánchez Mantero, coords., *Entre la Historia y la Memoria. Fernando María Castiella y la Política Exterior de España (1957-1969)* (Madrid: Real Academia de Ciencias Morales y Políticas, 2007).

¹³ See, for example: Helena Konrádová, "Relaciones entre España y Checoslovaquia: El Comercio en los Años Cincuenta," in *Las Relaciones Checo-Españolas*, ed. Josef Opatrný, 293-306 (Madrid: Universidad Carolina de Praga, 2007); James Mark, "The Spanish Analogy: Imagining the Future in State Socialist Hungary, 1948-1989," *Contemporary European History* 26, no. 4 (2017): 600-620; María Dolores Ferrero Blanco and Lourdes Miró, "Motivaciones y Dificultades en la Evolución de las Relaciones Económico-Comerciales Hispano-Polacas (1950-1970)," *Ayer* 67, no. 3 (2007): 81-118. Georgy Filatov, "Las Relaciones Comerciales entre la España Franquista y la URSS en los Años 1960-1970," in *Las Huellas del Franquismo, Pasado y Presente*, ed. Xavier María Ramos Díez-Astrain et al., 1169-1188 (Granada: Comares, 2019).

¹⁴ See for instance: Carlos Sanz Díaz, "España y la Cuestión Alemana bajo el Franquismo, 1945-1973. Entre la Doctrina Hallstein y el Comienzo de la 'Ostpolitik'," *Iberoamericana* 7, no. 26 (2007): 137-152; Dragomir Draganov, "Las Relaciones Búlgaro-Españolas en los Fondos de la Dirección General de los Archivos Búlgaros (1939-1989)," *Ayer* 67, no. 3 (2007): 119-135; Ricardo Martín de la Guardia and Guillermo A. Pérez Sánchez, "Bajo la Influencia de Mercurio: España y la Europa del Este en los Últimos Años del Franquismo," *Historia del Presente* 6 (2005): 43-59; José Luis Orella, "The Ostpolitik of Francoist Spain," *Przegląd Europejski* 46, no. 4 (2017): 98-117.

¹⁵ Powell, "Spain's External Relations." On the general context of the period, see for example: Mary Elise Sarotte, *Dealing with the Devil: East y, Détente and Ostpolitik, 1969-1973* (Chapel Hill: University of North Carolina Press, 2001); Arne Hofmann, *The Emergence of Détente in Europe: Brandt, Kennedy and the Formation of Ostpolitik* (London: Routledge, 2007).

¹⁶ Georgy Filatov, "Las Relaciones Comerciales entre la España Franquista y la URSS."

¹⁷ Claudio Hernández Burgos, "The Triumph of 'Normality', Social Attitudes, Popular Opinion and the Construction of the Franco Regime in Post-War Rural Spain (1936-1952)," *European History Quarterly* 46, no. 2 (2016): 291-310.

discourses in the media to influence public opinion and prevent alarmism. This paper explores how Spanish newspapers, in particular the official State press and a few privately-owned publications which frequently reproduced a narrative that served the interests of the regime, adopted new discourses and changed attitudes towards Soviet science to serve Franco's regime's interests.

The Spanish Press

During Franco's regime, the State exercised strict control over journalists and the media. The dictatorship regarded the press as a strategic tool for disseminating social and political guidelines, closely monitoring and manipulating it.¹⁸ During the Civil War, the regime formed the largest journalistic group, the Movement's Press (Prensa del Movimiento), by taking over publishing facilities from political parties, trade unions, and companies that had supported the Republic.¹⁹ The State controlled thirty-five newspapers and forty-five radio stations, establishing itself as the major newspaper publisher in Spain. Regional fascist publications such as *Imperio*, *Baleares*, *Mediterráneo* and *Libertad* were included, as well as illustrated magazines like *7 Fechas* and national newspapers such as *Pueblo*, one of the most widely distributed and read publications in Spain.²⁰

Additionally, there were Spanish newspapers owned by private companies. During the Spanish Civil War, some of these newspapers acted as sounding board for fascist propaganda. One such example is the regional newspaper *Diario de Burgos*, which was published in the city Franco's government moved to during the war.²¹ Privately-owned newspapers survived during the dictatorship partly due to the internal pluralism of Franco's regime, which included not

¹⁸ A short review on the studies that have addressed the issue of how the press was configured during Franco's regime may be found at: Clara Sanz Hernando, "La Prensa en el Franquismo. Desarrollo y Evolución Historiográfica desde la Dictadura a la Democracia," in *Tendencias de Investigación en Comunicación*, coord. Marta Pulido Polo, 15-31 (Sevilla: Egregius, 2017).

¹⁹ Begoña Zalbidea Bengoa, *Prensa del Movimiento en España: 1936-1983* (Bilbao: Universidad del País Vasco, 1996).

²⁰ See, for instance: María Cruz Seoane and María Dolores Sáiz, *Historia del Periodismo en España 3. El Siglo XX: 1898-1936* (Madrid: Alianza Editorial, 1996); Francisco Sevillano Calero, *Propaganda y Medios de Comunicación en el Franquismo* (Murcia: Universidad de Alicante, 1998); José Bernardo San Juan et al., *De Azorín a Umbral. Un Siglo de Periodismo Literario Español* (A Coruña: Netbiblo, 2009); María Pareja Olcina, *El Periódico Mediterráneo Durante la Transición Española (1975-1982)* (Castellón de la Plana: Universidad Jaime I, 2013); Ana Naseiro Ramudo, "El Archivo del Diario 'Pueblo'. Un Referente para la Historia de la Prensa en España Durante el Franquismo y la Transición Democrática," *Documentación de las Ciencias de la Información* 36 (2013): 11-29.

²¹ Clara Sanz Hernando, "Apología del Fascismo en la Capital de la Cruzada: 'Diario de Burgos' y 'El Castellano' al Servicio de la Causa de Franco," *Estudios sobre el Mensaje Periodístico* 25, no. 1 (2019): 511-527.

only fascist supporters but also Catholics, monarchists, and Carlist traditionalists. However, the State also exercised severe supervision over these newspapers in multiple ways.²²

In fact, the government established censorship through the Press Act of 1938 and assumed responsibility for organizing and controlling the press. This included regulating the journalist profession, the number and length of periodical publications, and the appointment and dismissal of newspaper managers and directors.²³ The Francoist faction had established the international news agency EFE in the late 1930s to provide news from abroad. Therefore, Spanish newspapers published most of the international news using the same texts, contributing to the ideological homogeneity of the Spanish press during this period.²⁴ Additionally, the government issued specific instructions on how to handle the information, create headlines, structure articles, and include notes for mandatory publication.²⁵

The regime's ability to decide which newspapers could be published led to the disappearance of many publications that were opposed to the dictatorship, had supported the Second Republic during the war or had failed to comply with the journalistic obligations imposed by the government. Moreover, the government also sponsored and encouraged new publications. An example of this is the regional newspaper *Nueva Rioja*, which openly supported Franco's regime and its propaganda. After the war, the government forced the conservative *Diario de La Rioja* and the liberal *La Rioja* to merge, creating *Nueva Rioja*.²⁶

During this period, the group of newspapers known as *Hoja del Lunes* also experienced an important growth. These were the only newspapers allowed to circulate on Mondays and were published by provincial press associations in different regions. The growth of these newspapers

²² Justino Sinova, *La Censura de Prensa Durante el Franquismo* (Madrid: Espasa Calpe, 1989); Carlos Barrera del Barrio, *Periodismo y Franquismo* (Barcelona: Ediciones Internacionales Universitarias, 1995); Carlos de las Heras Pedrosa, *La Prensa del Movimiento y su Gestión Publicitaria (1936-1984)* (Málaga: Universidad de Málaga, 2000); José Miguel Delgado Idarreta, coord., *Propaganda y Medios de Comunicación en el Primer Franquismo (1936-1959)* (Logroño: Universidad de La Rioja, 2019).

²³ Ministerio del Interior, "Ley [de Prensa (rectificada)]. Habiéndose padecido error en la publicación de la Ley de este Ministerio, fecha de ayer, 23 de abril," *Boletín Oficial del Estado* III (550), 24 April, 1938: 6938-6940.

²⁴ Víctor Olmos, *Historia de la Agencia EFE: El Mundo en Español* (Madrid: Espasa, 1997).

²⁵ Sinova, *La Censura de Prensa Durante el Franquismo*; Javier Terrón Montero, *La Prensa en España Durante el Régimen de Franco: Un Intento de Análisis Político* (Madrid: Centro de Investigaciones Sociológicas, 1981).

²⁶ "Nueva Rioja al Servicio del Estado Nuevo," *Nueva Rioja*, 1 October, 1938, 3. See also: Marcelino Izquierdo Vozmediano, "Diario La Rioja cumple 120 años. O cuando la Historia se Escribe Día a Día," *Belezos: Revista de Cultura Popular y Tradiciones de La Rioja* 11 (2009): 16-25; José Miguel Delgado Idarreta, Rebeca Viguera Ruiz, "De Nueva Rioja a La Rioja. De Franquismo a Democracia," *Historia Actual Online* 48, no. 1 (2019): 81-90. See also: Roberto Germán Fandiño Pérez, "Los Años Cuarenta bajo el Franquismo: Instrucciones de Uso, la Consigna de Prensa en Nueva Rioja," in *Franquismo y Democracia: Introducción a la Historia Actual de La Rioja*, coord. José Miguel Delgado Idarreta, 75-115 (Logroño: Instituto de Estudios Riojanos, 2000).

was a response to governmental requests and pressures to project a positive image of Franco's dictatorial regime.²⁷

The Press and Printing Act, passed in 1966, provided a slightly new context. The new legislation appeared to promote editorial diversity, but control over newspapers remained.²⁸ Despite the explicit mention of freedom of expression in the preamble of the law, it did not achieve any liberalizing goal.²⁹ In fact, the regime replaced direct censorship with fines and charges, leading to a new model of self-censorship.³⁰

Early Perceptions of Soviet Science

Franco's dictatorial regime lasted for almost forty years due to its ability to react and adapt to various transformations.³¹ The regime adopted a pragmatic foreign policy in response to a changing and often hostile environment.³² The Spanish press played a crucial role in justifying the political and ideological shifts of the regime over time. As will be demonstrated, this also influenced how the press presented technoscientific issues to the public, particularly regarding foreign science and technology and Soviet contributions.

After the Spanish Civil War, the Spanish fascist press propagated a rhetoric of animosity towards Protestant culture and the Anglo-Saxon world.³³ However, in the late 1940s, the failure of the Spanish model of self-sufficiency prompted Franco's regime to seek a political understanding with the United States and integrate Spain into the coalition of forces aimed at containing communism globally. New discourses emerged in the Spanish press, highlighting the military might of a Western bloc led by the United States, whose national values were claimed to be

²⁷ Catalina Fuentes Rodríguez, "Estrategias de Legitimación y Construcción de la Identidad Nacional en *La Hoja del Lunes*," in *Identità, Totalitarismi e Stampa. Ricodifica Linguistico-Culturale dei Media di Regime*, ed. Carla Prestigiacomo, 177-197 (Palermo: Palermo University Press, 2016).

²⁸ Elisa Chuliá, "La Ley de Prensa de 1966. La Explicación de un Cambio Institucional Arriesgado y de sus Efectos Virtuosos," *Historia y Política: Ideas, Procesos y Movimientos Sociales* 2 (1999): 197-220.

²⁹ See, for instance: Luis E. Luján Fernández, "La Política Informativa Tardofranquista. El Modelo de Control de la Empresa Privada de Prensa, (1966-1975)" (PhD diss., Universidad Complutense de Madrid, 2014); Carlota Álvarez Maylín, "El Registro de Empresas Editoriales: la Censura en la Ley de Prensa e Imprenta de 1966," *Studia Historica. Historia Contemporánea* 38 (2020): 297-326.

³⁰ Enrique Gómez-Reino y Carnota, "La Ley 14/1966, de 18 de Marzo, de Prensa e Imprenta: un Modelo de Autocensura," *Dereito* 16, no. 1 (2007): 209-219.

³¹ Pere Ysàs, "El Franquismo: de la Victoria a una Larga Supervivencia," in *La Alargada Sombra del Franquismo. Naturaleza, Mecanismos de Pervivencia y Huellas de la Dictadura*, ed. Asunción Esteban Recio, Dunia Etura and Matteo Tomasoni, 5-24 (Granada: Comares, 2019).

³² Julio Gil Pecharromán, *Estrategias de Supervivencia. Franquismo y Política Exterior (1939-1975)* (Madrid: Marcial Pons, 2022).

³³ See, for instance: Daniel Fernández de Miguel, "La Erosión del Antiamericanismo Conservador Durante el Franquismo," *Ayer* 75, no. 3 (2009): 193-221.

based on the Christian tradition.³⁴ During the central decades of the twentieth century, the Spanish press constructed a public image of nuclear science, heavily influenced by the United States' arguments and interests, thus contributing to the opening of Franco's regime.³⁵

Several Spanish newspapers emphasized the scientific and technological superiority of the West over the Soviets. An example is provided by the newspaper *Pueblo*, where Manuel Blanco Tobio, known for his national syndicalist ideology and one of the newspaper's most relevant foreign correspondents, wrote:

Science was born and raised in the West. The only thing that Asian and Eurasian people have been able to assimilate is its main modern derivative: technology. So, what could be called Russian science currently has only one mission: to destroy the "international bourgeois reaction." No speculative or theoretical interest distracts the Soviet Academy of Sciences.³⁶

Similarly, another syndicalist and Falangist, Antonio José Hernández Navarro, a lawyer and journalist who later became a member of the Spanish parliament in the 1950s, wrote that Russian science was merely "scientific lies at the service of propaganda."³⁷ The Lysenko affair provided even more ammunition to critics, who portrayed Soviet scientists as "ignorant fraudsters."³⁸ Some newspapers also reported Bertrand Russell's comments on Stalin's actions

³⁴ José Antonio Abreu Colombri, "La Imagen de los Estados Unidos a través la Prensa del Falangismo en la España Franquista (1939-1959)," *Faces da História* 9, no. 2 (2022): 113-135.

³⁵ Ana Romero de Pablos, "Prensa y Tecnología en la España de Franco: del Secreto a la Política Atómica Pública," *Dynamis* 38, no. 1 (2018): 189-218. The introduction of nuclear energy in Spain was a complex process that has been studied under different historiographical approaches. See, for instance: Albert Presas Puig, "Science on the Periphery. The Spanish Reception of Nuclear Energy: an Attempt at Modernity?," *Minerva* 43, no. 2 (2005): 197-218; Albert Presas Puig, "La Inmediata Posguerra y la Relación Científica y Técnica con Alemania," in *Cien Años de Política Científica en España*, eds. Ana Romero de Pablos and María Jesús Santesmases, 173-210 (Madrid: Fundación BBVA, 2008); Romero and Sánchez Ron, *Energía Nuclear en España*; Néstor Herran and Xavier Roqué, eds., *La Física en la Dictadura. Físicos, Cultura y Poder en España, 1939-1975* (Barcelona: Universitat Autònoma de Barcelona, 2012); Néstor Herran, "Isotope Networks: Training, Sales and Publications, 1946-1965," *Dynamis* 29 (2009): 285-306; María Jesús Santesmases, "Peace Propaganda and Biomedical Experimentation: Influential Uses of Radioisotopes in Endocrinology and Molecular Genetics in Spain (1947-1971)," *Journal of the History of Biology* 39, no. 4 (2006): 765-794; María Jesús Santesmases, "From Prophylaxis to Atomic Cocktail: Circulation of Radioiodine," *Dynamis* 29 (2009): 337-364; Joseba de la Torre and Mar Rubio-Varas, "Nuclear Power for a Dictatorship: State and Business Involvement in the Spanish Atomic Program, 1950-85," *Journal of Contemporary History* 51, no. 2 (2016): 385-411; Rosa Medina-Doménech and Alfredo Menéndez-Navarro, "Cinematic Representations of Medical Technologies in the Spanish Official Newsreel, 1943-1970," *Public Understanding of Science* 14, no. 4 (2005): 383-408.

³⁶ Manuel Blanco Tobio, "La Nueva Mentalidad Rusa," *Pueblo*, 5 April, 1947 2. Hereafter, all translations by the author unless otherwise stated.

³⁷ Antonio José Hernández Navarro, "Ciencia Soviética," *Imperio*, 18 June, 1948, 4.

³⁸ See: "Los Impostores de la Ciencia Soviética," *Pueblo*, 1 December, 1948, 5; "Estafador Ignorante," *Diario de Burgos*, 2 December, 1948, 3; "Lysenko, el 'Hombre de Ciencia'," *Nueva Rioja*, 2 December, 1948, 1. On the Lysenko controversy and the denial of genetics under Stalin, see for instance: David

against scientists who doubted Lysenko's ideas. Russell stated that an atomic bomb built on Marxist scientific principles would probably not explode, as Marxist science was outdated.³⁹

In November 1949, Franco made a statement to the US-based agency International News Service. He argued that the Soviets could be blackmailing the Western world by suggesting that they had the atomic bomb and explained that an explosion of three to four thousand tonnes of trinitrotoluene could cause effects similar to those of the atomic bomb on seismographs and induce confusion.⁴⁰ Initially, the Spanish press suggested that the Soviets were close to producing the atomic bomb, but had not yet succeeded. The press emphasised the difference between knowing how to produce the weapon and actually being able to do so, highlighting the superiority of Western science and industry.⁴¹ However, it soon became clear that the Soviets had indeed produced the bomb. This posed significant problems for the Western bloc, not only politically and militarily, but also in terms of propaganda. To address this issue, some Spanish journalists criticised the inadequate performance of American intelligence services and the success of Russian spies.⁴² Additionally, Spanish newspapers reported the shortcomings of Soviet science and raised concerns about its potential dangers.⁴³

Overall, the press gradually dismantled preconceived notions about the technological superiority of the United States during the 1950s. Journalists recognized the existing scientific and technological competition with Russia as equal. This new perception, partly based on the

Joravsky, *The Lysenko Affair* (Chicago: Chicago University Press, 1986); Nils Roll-Hansen, *The Lysenko Effect. The Politics of Science* (Amherst: Humanity Books, 2005); and the different articles at *The Lysenko Controversy and the Cold War*, a special issue of the *Journal of the History of Biology* 45, no. 3 (2012). On the impact of the Lysenko affair in Spain, see: Clara Florensa Rodríguez, "Els Discursos sobre l'Evolució en el Franquisme (1939-1967). La Generació del 48 i *La Evolución sin Problema*" (PhD diss., Universitat Autònoma de Barcelona, 2017), 121-133.

³⁹ "Stalin 'Liquida' a los Hombres de Ciencia que se Desvían del Comunismo," *Baleares*, 14 September, 1949, 6.

⁴⁰ "La Bomba Atómica Rusa Podría Ser una Monstruosa Mixtificación," *7 Fechas*, 15 November, 1949, 2.

⁴¹ Ibid. See also: "Los planes de Trece Hombres que Quieren Apoderarse del Mundo," *Nueva Rioja*, 9 March, 1949, 4; "... y el Mundo Marcha," *La Almudaina*, 27 September, 1949, 10; Rafael de Luis, "El Año Atómico," *Nueva Rioja*, 1 January, 1950, 3.

⁴² Manuel Blanco Tobio, "Una Ramificación en Inglaterra de la Red de Espionaje Atómico Soviético," *Pueblo*, 8 February, 1950, 6; Azor, "Inquietudes en América," *Baleares*, 5 February, 1950, 5.

⁴³ See, for instance: Manuel de Agustín, "La Vuelta de Thorez Llega con Tintes Sombríos para el Comunismo," *Libertad*, 20 September, 1952, 6; Enrique Miguel Borgas, "La Técnica de las 'Confesiones'," *Pueblo*, 18 February, 1953, 2; Andre Pigal, "Un Fracaso de la Ciencia Soviética," *Baleares*, 12 April, 1953, 8.

opinions of several prominent nuclear physicists such as Edward Teller and Luis Álvarez,⁴⁴ spread throughout the Western world and permeated the Spanish press.⁴⁵

The Spanish press was initially cautious when reporting on scientific and technological advances announced by the Soviets, due to Russia's reputation for using insidious tactics in the cold war.⁴⁶ As one Spanish newspaper stated:

Soviet scientists, who have an amazing ability to make "real" all the dreams of mankind, however far-fetched they may be, have just announced to the world, via Radio Moscow, that they have succeeded in obtaining energy from the tides . . . Russian scientists, who not long ago also announced that they were "about to" succeed in harnessing solar energy, seem to have already exhausted their capacity for appropriating other people's inventions, so they now devote themselves to "inventing inventions."⁴⁷

In general, however, the Spanish media reported the success of Soviet initiatives, particularly in nuclear matters. Reports highlighted the strong impact of Soviet scientific and technological advances at the IV International Electronic and Nuclear Review held in Rome in 1957.⁴⁸ After the Soviets built their first nuclear reactors in the late 1940s and successfully constructed their first commercial nuclear power plant in 1954, the launch of Sputnik confirmed the USSR's rapid scientific and technological development and the country's progress.⁴⁹

The Sputnik Factor

After the launch of Sputnik I in October 1957, the Spanish press adopted a new approach to discussing Soviet science. As stated in *Pueblo's* pages:

The psychological impact produced . . . by the artificial satellite that Russian science has launched beyond the stratosphere has been, undoubtedly, of formidable propaganda effectiveness . . . for the benefit of Russian prestige.⁵⁰

⁴⁴ Ian H. Kennedy, "The Sputnik Crisis and America's Response" (master's thesis, University of Central Florida, 2005).

⁴⁵ See, for example: "La Bomba 'H' Rusa ha Despertado al Pueblo Americano," *Pueblo*, 11 September, 1953, 1; "Es Factible la Construcción de un Satélite Artificial," *Hoja Oficial del Lunes*, 4 July, 1955, 3.

⁴⁶ Lopez MacMillan, "En Serio, pero con Reserva," *Nueva Rioja*, 30 August, 1957, 8.

⁴⁷ "Los Rusos Dicen Haber Logrado Energía de las Mareas," *El Adelantado de Segovia*, 30 September, 1957, 6.

⁴⁸ See, for instance: "En Roma: Reseña Electrónica y Nuclear," *La Vanguardia*, 29 June, 1957, 11.

⁴⁹ Paul R. Josephson, *Red Atom: Russia's Nuclear Power Program from Stalin to Today* (Pittsburgh: University of Pittsburgh Press, 2005).

⁵⁰ "La Ciencia de Equipo," *Pueblo*, 14 October, 1957, 3. It should be noted that *Pueblo* was dependent on the National Delegation of Trade Unions Delegation and therefore enjoyed a certain degree of autonomy. However, although it had more freedom than other official newspapers to deal with certain issues, its editorial line followed Francoist propaganda and, despite a certain populism and progressivism, was

Spanish rulers saw the launch of Sputnik as a clear sign of Soviet advances in missile technology, which sparked new concerns about the presence of American military bases in Spain and led to an unsuccessful attempt to remove nuclear weapons from the Torrejón air base near Madrid—although Eisenhower's visit to Spain in 1959 restored much of the confidence in bilateral relations.⁵¹ The Spanish press thus assumed a more neutral role in the “propaganda war” and “scientific competition between Slavs and Latin-Yankees.”⁵² The articles published in the Spanish press on the launch of Sputnik I not only presented scientific data and technological features, but also explained how the USSR had surpassed the US in the scientific experiments that marked the International Geophysical Year.⁵³

Franco regime's efforts to improve and normalize economic and trade relations with communist countries in the late 1950s and 1960s encouraged the Spanish press' shift towards recognizing Soviet scientific and technological contributions. In this sense, Franco himself surprisingly praised the virtues of the Soviet regime in a discourse read on 9 October, 1957, a few days after the launch of Sputnik. The anti-fascist magazine *Ibérica por la Libertad*, published by Spanish Republicans exiled in the United States, reported as follows:

Franco himself said it. In a speech at the inauguration of the Escombreras power station, near Cartagena: the Russians were the first to have the intercontinental rocket and the artificial satellite because in Russia “there is unity and discipline.” These technical achievements, says the Caudillo, “could not have been achieved in the old Russia; they had to happen in the new Russia.” Moreover, these technical realisations could not happen “in divided countries or in countries without order.” “Political unity and continuity of authority and discipline” were the factors of Soviet technical progress, according to the Generalissimo. He draws some consequences from his examination of Soviet reality: “It is necessary to orientate the youth,” he says. And he insists: Russia “showed us what can be achieved when culture is directed.” In the eyes of the Caudillo, therefore, the artificial Soviet satellite is a product of totalitarianism. Franco has said so. He has confirmed, in his own words, and no doubt after careful consideration, what we had said, with a sceptical shrug of the shoulders: that Franco might well come to terms, one day, with the Kremlin. Now, he himself gives the reasons for this, stresses the

characterised by a strong criticism of the opposition to the regime, which some unofficial newspapers showed. See: Antonio Alférez, *Cuarto Poder en España. La Prensa desde la Ley Fraga de 1966* (Barcelona: Plaza y Janés 1986); José Javier Sánchez Aranda and Carlos Barrera, *Historia del Periodismo Español. Desde sus Orígenes hasta 1975* (Pamplona: Eunsa, 1992).

⁵¹ Powell, “Spain's External Relations.”

⁵² Sergio Antolin, “La Guerra de los ‘Sputniks’,” *Libertad*, 9 January, 1959, 3; Sergio Antolin, “La Guerra de los ‘Sputniks’,” *Imperio*, 10 January, 1959, 2.

⁵³ See, for example, the newspapers of the day after the launch of Sputnik I: “Rusia Lanzó Anoche el Primer Satélite Artificial de la Tierra,” *Diario de Burgos*, 5 October, 1957, 1 and 3; “Rusia Ha Lanzado el Primer Satélite Artificial,” *La Rioja*, 5 October, 1957, 1; “Madrid Establece Comunicación con el Satélite Artificial,” *Pueblo*, 5 October, 1957, 1 and 19; “Los Rusos Han Lanzado el Satélite Artificial,” *Libertad*, 5 October, 1957, 1 and 3. See also: Achim Warort, “Así Nació el ‘Sputnik’,” *Diario de Burgos*, 26 February, 1958, 6.

similarities between his regime and the Soviet one, pointing out, for example, that in Spain, without the continuity of authority and discipline that he praises in Russia, works such as the power station inaugurated at the time when he was making these statements, would not have been possible.⁵⁴

Spanish newspapers did not report these public declarations, as the government was quick to inform that the press representatives could only partially cover the news, and they should not reproduce the discourse.⁵⁵ In fact, two weeks later, Franco delivered a speech strongly criticizing communism, its aberrations, and how it was only sustained by terror and force, in order to counterbalance this discourse.⁵⁶ The message, however, was clear: Soviet achievements were extraordinary and exemplary. As the Spanish press recognised:

Any remaining doubts about the formidable scientific breakthrough that Russia has developed have been removed with the launch of the second artificial satellite. If the first “Sputnik” was a boast, so is the second . . . Such events are not improvised. They require meticulous, thorough and extensive preparation by specialists or researchers, in accordance with the most audacious advances in science . . . The Caudillo has just said so in his historic speech at Escombreras. We may not like the fact that this revelation came from a country where “human rights” are most trampled upon. But it is a lesson and an example of what a country can achieve when it lives under a regime of political unity, where there is also authority and continuity. The result of organising education to meet the demands of our time if one does not want to lag behind.⁵⁷

During the late 1950s and 1960s, Spanish newspapers reported on the nuclear arms race and the space race. It was definitely acknowledged that Russia had taken the lead in astronautics—particularly after the launch of Sputnik 3 and Lunik 2—, but writers also emphasized that this did not indicate the superiority of communism or Soviet science.⁵⁸ For example, authors explained that the United States had not launched an artificial satellite earlier because they intended to do so with guarantees of success and all necessary equipment to ensure the world's scientific interest.⁵⁹ It was also argued that the success of Soviet science did not correspond to

⁵⁴ Víctor Alba, “El Satélite, Franco y Kruchev,” *Ibérica por la Libertad* 5, no. 11, 15 November 1957: 8-10. On the history of this journal, see: Marianne Leijte, “La Revista Ibérica por la Libertad y su Activismo Antifranquista en Estados Unidos (1953-1966)” (PhD diss., Universidad Autónoma de Madrid, 2021).

⁵⁵ See: Francisco José Franco Fernández, “Franco y el Extraño Viaje a Cartagena,” *Cuadernos Republicanos* 94 (2017): 77-84.

⁵⁶ “Editorial. Contradicciones Aparentes,” *Ibérica por la Libertad* 5, no. 11, 15 November, 1957, 13.

⁵⁷ “Rusia, 2 Satélites. Estados Unidos, 0,” *Baleares*, 7 November, 1957, 1.

⁵⁸ See, for example: “Distingamos,” *El Diario de Ávila*, 9 October, 1959, 5; “Se Ha Localizado la Base de Lanzamiento de los ‘Lunik’,” *Pueblo*, 9 October, 1959, 5; “Ciencia y Cultura: 1.327 Kilos Pesa el Tercer ‘Sputnik’ Ruso,” *Libertad*, 20 May, 1958, 4; “Ciencia y Cultura: 1.327 Kilos Pesa el Tercer ‘Sputnik’ Ruso,” *Imperio*, 21 May, 1958, 6; Achim Warort, “‘Discoverers’ Contra ‘Sputniks’,” *Baleares*, 31 August, 1960, 16.

⁵⁹ Daniel F. Gilmore, “Soviéticos y Americanos, como Creadores de Satélites,” *Hoja Oficial del Lunes*, 7 October, 1957, 1.

its superiority, but rather to the difference in immediate goals between Russia and the United States.⁶⁰ As Blanco Tobio stated:

It has now been proven that a regime like Russia's is better able to channel "technological imperialism" in a single direction than an inorganic democracy . . . All in all, at the moment, the United States, despite all odds, remains at the forefront of technological development. But the time has come to ask: for how long? ⁶¹

During the 1960s, Spanish newspapers regularly reported on the scientific achievements of Russia, specifically in the field of astronautics. They echoed some of the communications from the Soviet news agency TASS, despite acknowledging its propagandistic goals and the secrecy surrounding these issues.⁶² Even though Salvador Vallina, a Spanish journalist who also worked as a spy for the Franco regime, was known for his fascist views, he acknowledged that Russia dominated the conquest of the cosmos and that Soviet science and technology had earned a position "in the research and achievements of the present age."⁶³ Even the lawyer and politician Antonio Castro Villacañas, identified with the purest Falangist sector of the regime, acknowledged in the late 1960s that Sputnik, Yuri Gagarin's orbit launch and Alexei Leonov's spacewalk were historical milestones for Russian technology.⁶⁴

Spanish newspapers reported positively on Soviet scientific and technological programs, acknowledging the Soviet Union's dominance in these fields.⁶⁵ Some journalists attempted to explain the success not as a result of a state-controlled and state-directed economy, but rather

⁶⁰ Enrique Ruiz García, "La Entrevista Eisenhower-MacMillan. Horas de Balance para los Anglonorteamericanos en Wáshington," *Pueblo*, 24 October, 1957, 19.

⁶¹ Manuel Blanco Tobio, "La Investigación Científica Soviética Puede Desbordar a la de los Estados Unidos," *Pueblo*, 17 October, 1957, 4.

⁶² There are numerous examples, for instance: "La U.R.S.S. Anuncia: Importantes Pruebas de proyectiles dirigidos en el Pacífico Central," *7 Fechas*, 12 January, 1960, 2; "Rusia Ha Lanzado una 'Nave del Espacio'," *Hoja del Lunes*, 16 May, 1960, 1; "Hombre Ruso, en Órbita," *Pueblo*, 11 August, 1962, 1; Gunnar Lundquist, "El Hombre se Pasea ya por el Espacio," *Diario de Burgos*, 27 March, 1965, 5; "Asombroso Experimento Espacial," *Diario de Burgos*, 31 October, 1967, 1 and 5; Alberto Crespo, "La Unión Soviética Ha Inaugurado la Era de las Estaciones Orbitales," *Baleares*, 1 November, 1967, 4; Carlos Delgado Olivares: "Dos Proezas Cósmicas," *Diario de Burgos*, 18 October, 1968, 12; "Una Cápsula Rusa, en torno a la Tierra," *Baleares*, 15 January, 1969, 5. On the history of TASS, see: Elena Vartanova, Andrei Vyrkovsky, "Between the State and the Market: An Analysis of TASS' Fall and Rise," *Journalism* 21, no. 12 (2020): 1842-1858.

⁶³ Salvador Vallina, "Rusia, Orgullosa de su Primacía en la Conquista del Cosmos," *Libertad*, 2 November, 1965, 8; Salvador Vallina, "Rusia, Orgullosa de su Primacía en la Conquista del Cosmos," *Baleares*, 11 November, 1965, 22.

⁶⁴ Antonio Castro, "El Misterio del Luna XV Puso en Alerta a Inglaterra," *Mediterráneo*, 20 July, 1969, 8.

⁶⁵ "Keldysh, Presidente de la Academia de Ciencias Soviéticas, es el Hombre que Dirige Todos los Programas Tecnológicos de la U.R.S.S.," *El Diario de Ávila*, 26 April, 1968, 6-7.

due to the massive opening of primary, secondary and university educational institutions.⁶⁶ Some texts even projected an image that the artificial satellites had proven socialism's superiority over capitalist countries. As stated in *Mediterráneo*, "economy, science, culture and the creative genius of the people, in all spheres of life, develop better and faster under socialism."⁶⁷ While the dominant discourse in the Spanish press was still one of the failure of communism and its policies, by the end of the 1960s some of these statements shifted slightly in tone. It was therefore not surprising to find few texts stating that "communism was not such a definitive failure as the Yankee media claim."⁶⁸ Similarly, other texts called for a dialogue with it, as the writer Emiliano Aguado, whose early strong commitment to national syndicalism had waned over the years, argued.⁶⁹

The Need for Cooperation

The Spanish press emphasized the importance of depoliticizing scientific activity and promoting technological cooperation during the 1960s, coinciding with the opening-up policies of the Franco regime. For example, the full development of the cosmic era was said to require the concentration of international technoscientific knowledge, material resources, and financial means.⁷⁰ In fact, the Spanish press not only rejected the notion of communist or capitalist science but also discussed with enthusiasm the idea of setting up international teams to tackle scientific problems, such as curing cancer or understanding the human brain.⁷¹ In other words, there was a need for international scientific and technological collaboration –which also could help many countries to build stronger and more stable economies.

The Soviets had indeed assisted several countries in this way. Spanish newspapers particularly commented on Russian aid to China. In 1960, Carlos Martínez de Campos, the tutor of Prince Juan Carlos de Borbón, who had previously served as a military deputy attached to the Chinese embassy and later as chief of staff, published an article explaining how Soviet scientists and

⁶⁶ "Enseñanza Gratuita," *Baleares*, 18 November, 1966, 2; "Una Universidad sin Alborotos o Historia de una Sociedad Científica," *Baleares*, 30 March, 1968, 14; "La Universidad Proyecta el Bienestar," *Libertad*, 24 April, 1968, 8; "La Universidad Proyecta el Bienestar," *Baleares*, 15 June, 1968, 21.

⁶⁷ Julio Mediavilla y López, "Los 'Sputniks' Iniciaron la Puesta en Marcha del 'Desafío Americano,'" *Mediterráneo*, 6 November, 1969, 6.

⁶⁸ Ismael Herraiz, "La Unión Soviética, a Flor de Piel (VII). Meditación Revolucionaria para Ganar el Jubileo," *Baleares*, 7 January, 1968, 21. Note that Ismael Herraiz was one of the most important Falangist correspondents of the time. See, for instance: Álvaro de Diego González, "Ismael Herraiz, Cronista Azul del Esplendor y la Ruina del Eje," in *Propagandistas y Diplomáticos al Servicio de Franco (1936-1945)*, ed. Antonio César Moreno Cantano, 243-271 (Gijón: Trea, 2012).

⁶⁹ Emiliano Aguado, "Diálogos con el Comunismo," *El Español*, 25 May, 1968, 11.

⁷⁰ "El Futuro del Mundo Está en el Cosmos," *Diario de Burgos*, 20 August, 1966, 7.

⁷¹ "Buena Disposición de los 'Grandes' para una Conquista Conjunta de la Luna," *Baleares*, 17 September, 1963, 18.

engineers had assisted in the development of the Chinese nuclear program.⁷² According to the report, the Soviet Union had provided China with its first nuclear reactors in 1955, which were fully operational by the early 1960s.⁷³ Spanish newspapers highlighted that China had achieved the ability to manufacture atomic bombs with Russian support.⁷⁴

By the late 1960s, a new discourse had emerged that challenged the biased image of Russian science that had been present in popular culture for decades. Santiago Lorén Esteban, winner of the Premio Planeta (a literary prize awarded by the Spanish publishing house Planeta) in 1953, wrote an article that exemplified this new perception of Soviet science:

On the very same day that a magnificent Russian spacecraft landed gently on the surface of the planet Venus, sending back to Earth reports and data in a manner bordering on the miraculous, the first episode of the new series *The Saint* has appeared on Spanish television screens . . . The coincidence of these events – the tremendous and marvellous triumph of Russian science and the appearance of the tiny, clumsy film – must have produced stentorian guffaws of sarcasm if it were not healthier to replace this laughter with indignation. How long will they try to make us believe . . . the absolute goodness of American and Western intentions with regard to science, and the no less absolute evil of the Communists when it comes to handling the present techniques of progress? Could the Russians have achieved and maintained for so many years the leadership in space exploration by using only kidnapped scientists kept in chains to the legs of their laboratory tables? . . . Spain today . . . has shown itself to be open and tolerant of the scientific progress of the Russian people when it is beneficial to the whole of humanity and devoid of political gain. Scientists from Russia have also lived among us, and our scientists have also gone to Russia, attending congresses in both countries and mutually benefiting from the encounter . . . And the country has been duly informed about these specific points of understanding and dialogue, which in no way oblige us to accept the ideological, philosophical and political assumptions that underlie the development of each country.⁷⁵

⁷² See: Carlos Martínez de Campos, “Drama en Oriente. China y Rusia,” *ABC*, 18 March, 1960, 1.

⁷³ “Conjeturas sobre las Posibilidades Nucleares de la China Roja,” *La Vanguardia*, 17 August, 1963, 32.

⁷⁴ Luis Mira Izquierdo, “A Pesar de sus Adelantos, la China Roja no Estará a Nivel Occidental Hasta Dentro de Treinta Años,” *Diario de Burgos*, 9 February, 1966, 5. Mira Izquierdo was known for his links with Acción Católica (Catholic Action), an ecclesiastical movement responsible for censoring creative projects to be published in Franco's Spain. See: Ángela Pérez del Puerto, *Reprobada por la Moral: la Censura Católica en la Producción Literaria Durante la Posguerra* (Madrid and Frankfurt: Iberoamericana Vervuert, 2021). The important role played by the Italian physicist Bruno Pontecorvo as a soviet expert was also pointed out in: Hugo Portisch, “La China que He Visto,” *La Vanguardia*, 16 December, 1971, 51.

⁷⁵ Santiago Lorén, “¡Qué Malos Son los Rusos en T.V.E.!,” *Pueblo*, 30 October, 1967, 2. Loren was a gynaecologist with a very productive career as a writer. He lectured history of medicine at the University of Zaragoza and later became member of the Spanish People's Socialist Party led by Enrique Tierno Galván. See: Javier Aguirre, “La Guía ‘Aragón’ de Santiago Lorén en Ediciones Destino,” *Rolde: Revista de Cultura Aragonesa* 176-177 (2021): 96-113

By the late 1960s, the Spanish press had almost completely depoliticised science and technology. Ideological and political factors were excluded from public debate to mobilise consensus on issues that affected the economic policies of the Franco regime. Spanish authorities viewed Russia as a market with unlimited potential and newspapers reported that Soviets treated Spaniards with respect, facilitating commercial operations and providing complete freedom of movement in the world's largest country.⁷⁶ Moreover, Spanish scientists benefited from this new situation by importing scientific material from Eastern countries, displacing the propagandistic agenda that some of the purchased instruments undoubtedly had.⁷⁷

Spanish newspapers depicted Soviet scientists as one of the groups that protested against the political structure and were disillusioned with communist ideology, particularly after the US Secretary of State informed Franco in 1968 that scientists in the nuclear energy and space fields had become members of a world scientific community and were no longer controlled by the Communist Party.⁷⁸ In this context, Spanish newspapers reported on the peaceful contributions of Soviet scientists.⁷⁹ Additionally, the press openly displayed and normalized cooperation projects between Russian and Spanish scientists. For instance, the University of La Laguna (Canary Islands) collaborated with the Soviet Academy of Sciences to analyse and increase the productivity of the Atlantic-Saharan fishing zone.⁸⁰

It was in this context that the Spanish National Uranium Company (ENUSA) also negotiated in the early 1970s with the Soviet company Techsnabexport (TENEX) to secure low-cost services for the conversion of uranium hexafluoride and the enrichment of uranium.⁸¹ The

⁷⁶ Diego Carcedo, "Los Rusos Elegantes Vestirán este Verano Camisas Españolas," *Baleares*, 16 April, 1968, 24.

⁷⁷ Pedro Ruiz-Castell and Ignacio de la Lastra, "An Instrument from Communist Europe in Franco's Spain," in *East and West: The Common European Heritage. Proceedings of the XXV Scientific Instrument Symposium*, ed. Ewa Wyka, Maciej Kluza and Anna Karolina Zawada, 59-64 (Krakow: Jagiellonian University Museum, 2006).

⁷⁸ Document 221: Memorandum of Conversation, Madrid, November 18, 1968, Foreign Relations of the United States, 1964-1968, Volume XII, Western Europe. See also: "Nueva 'Depuración' de Científicos en la Unión Soviética," *Libertad*, 11 April, 1969, 8 and 6; "Parece que el Luna XV ha Fracasado," *Mediterráneo*, 28 July, 1969, 11.

⁷⁹ Francisco Egulagaray, "Logros Científicos Soviéticos con Carácter Pacífico," *Mediterráneo*, 28 February, 1969, 16. Note that Egulagaray had been linked in his youth to the most orthodox anti-capitalist Falangism.

⁸⁰ "Posible Colaboración Científica Hispano-Rusa. La URSS Pondría a Disposición de España Barcos y Material para el Estudio Oceanográfico," *Diario de Burgos*, 25 September, 1969, 10; "Cooperación Científica Ruso-Española sobre la Pesca Atlántica," *Baleares*, 25 September, 1969, 6. On the scientific collaboration between Spain and the USSR in the economic-fishing field, see: Irina Yányshev Nésterova and Santiago de Luxán Meléndez, "Sovhispan: A Collaboration Model between Spain and the USSR in the Canary Islands (1967-1991)," *Investigaciones de Historia Económica - Economic History Research* 17, no. 3 (2021): 1-13.

⁸¹ "Acuerdo Hispano-Soviético para el Aprovisionamiento de Servicios de Enriquecimiento de Uranio a España," *La Vanguardia*, 31 March 1974: 15; "España Tiene Asegurado el Suministro de Uranio hasta

USSR was interested in implementing technological linkage of as many countries as possible to Soviet technologies, particularly in the field of nuclear energy and several contracts were signed, partly due to the depoliticized image of reliability and trust built around Russian science and technology.⁸² In summary, the press reported how the late Franco regime promoted scientific and technological cooperation as a means of preparing the public for the possible resumption of diplomatic relations between Madrid and Moscow.⁸³

Conclusion

The study of science and technology news in the daily press can help to understand the communication processes that shape scientific knowledge.⁸⁴ Indeed, the popularization of science is a complex process influenced by various social, economic, cultural, and political factors. These factors are also influenced by the ongoing communication between the scientific community, political authorities and public opinion, and by the specific environmental conditions in which knowledge circulates.⁸⁵

Certainly, newspapers may encourage national scientific and technological modernisation, given their economic and political interests. Therefore, the study of scientific news published in newspapers can provide valuable data on science popularization practices, including scientific practices, the role of editors in shaping audiences, the appropriation of scientific knowledge, and political interests in scientific rhetoric. This paper shows how such rhetoric can be constructed

el Año 1980," *Diario de Burgos*, 12 May, 1977, 21; "La URSS Enriquecerá el Uranio Español," *Diario de Burgos*, 30 August, 1977, 16.

⁸² Eldar R. Salakhedinov and Vasily A. Sidorov, "Russian Projects and Energy Cooperation in South Africa," *Studies on Russian Economic Development* 29, no. 3 (2018): 336-342; Richard Alan Charpi, "Essays on Uranium Enrichment" (PhD diss., Massachusetts Institute of Technology, 1979). On the history of soviet nuclear energy, see: Gloria Duffy, *Soviet Nuclear Energy: Domestic and International Policies* (Santa Monica: RAND, 1979); Oleg Bukharin, "Understanding Russia's Uranium Enrichment Complex," *Science and Global Security* 12, no. 3 (2004): 200-201.

⁸³ "La Prensa Francesa Habla del Futuro Hispano-Ruso," *Libertad*, 4 October, 1966, 1-2; "Especulaciones de 'Le Figaro' sobre una Posible Reanudación de las Relaciones entre Madrid y Moscú," *Diario de Burgos*, 5 October, 1966, 1 and 5.

⁸⁴ James Secord, "Knowledge in Transit: Halifax Keynote Address," *Isis* 95, no. 4 (2004): 654-672; Richard Whitley, "Knowledge Producers and Knowledge Acquirers: Popularization as a Relation between Scientific Fields and their Production," in *Expository Science*, eds. Terry Shinn and Richard Whitley, 3-28 (Dordrecht: Reidel Publishing Company, 1985); Jonathan R. Topham, "Focus: Historicizing 'Popular Science'," *Isis* 100, no. 2 (2009): 310-318.

⁸⁵ Bernard Lightman, ed., *Science in Context* (Chicago: University of Chicago Press, 1997); Bernadette Bensaude-Vincent, *L'Opinion Publique et la Science: A Chacun son Ignorance* (Paris: Sanofi-Synthelabo, 2000); Bernadette Bensaude-Vincent, *La Science contre l'Opinion: Histoire d'un Divorce* (Paris: Empêcheurs de penser en rond, 2003); Agustí Nieto-Galán, *Los Públicos de la Ciencia. Expertos y Profanos a través de la Historia* (Madrid: Marcial Pons, 2011).

not only by scientists, but also by mediators and political leaders who seek to manipulate the public image of science to serve their interests.

Furthermore, this work engages with the existing historiography of Francoism. Throughout its forty years of dictatorship, the regime sought to project a more attractive and practical image, both internally—to increase its acceptance among the population—and externally—to gain international recognition. To this end, it did not hesitate to use propaganda in the broadest sense of the word.⁸⁶ In fact, the propagandistic discourse in the service of the regime's interests was reinforced by the fact that on many occasions the same texts and approaches to the various issues were published in the different newspapers, especially in relation to news from abroad.

The press, particularly the Movement Press, acted as an effective propaganda tool because of its ability to adapt narratives to the changing discourses of a regime obsessed with its own survival. Serving the regime meant transforming narratives such as those discussed in this article in relation to the image of Soviet science and technology. The way in which newspapers reported Soviet scientific and technological progress, gradually depoliticising such contributions—especially after the launch of Sputnik and in line with the reformist interests of Franco's technocratic government—served this purpose.

Under the tight control and censorship mechanisms at the government's disposal, official newspapers presented a narrative that served the regime's changing foreign policy interests. There is an extensive body of work on the foreign relations of Franco's Spain. However, most of it has focused on the relationship between the United States and Spain, the regime's integration into the Western European defence system and its international recognition as a result of the international situation of political blocs during the Cold War.⁸⁷ This interest has also influenced studies on the history of science and technology in the Franco dictatorship, which have mostly highlighted the links between Spanish science and technology and Western European countries.⁸⁸

⁸⁶ Sevillano Calero, *Propaganda y Medios de Comunicación en el Franquismo*; Delgado Idarreta, *Propaganda y Medios de Comunicación en el Primer Franquismo*.

⁸⁷ See, for instance: Ángel Viñas, *Los Pactos Secretos de Franco con Estados Unidos. Bases, Ayuda Económica, Recortes de Soberanía* (Barcelona: Grijalbo, 1981); Antonio Marquina Barrio, *España en la Política de Seguridad Occidental, 1936-1986* (Madrid: Estado Mayor del Ejército, 1986); Manuel Espadas Burgos, *Franquismo y Política Exterior* (Madrid: Rialp, 1987); Portero, *Franco Aislado*; Ángel Viñas Martín, *En las Garras del Águila: los Pactos con Estados Unidos, de Francisco Franco a Felipe González (1945-1995)* (Barcelona: Crítica, 2003); Charles Powell, *El Amigo Americano. España y Estados Unidos: de la Dictadura a la Democracia* (Madrid: Galaxia Gutenberg - Círculo de Lectores, 2011)

⁸⁸ See, for example, the section devoted to the internationalisation of science and culture in the Franco regime in: Maricío Janué i Miret and Albert Presas i Puig, eds., *Science, Culture and National Identity in Francoist Spain, 1939-1959* (New York: Palgrave MacMillan, 2021). There is a growing bibliography dealing with the influence of the international scientific community on the development of science in Spain during the Franco regime. See, for instance: María Jesús Santesmases and Emilio Muñoz,

In recent decades, however, the study of Spain's foreign relations with the countries of Eastern Europe during the twentieth century has challenged certain simplistic views that denied the regime's links with the countries of the socialist bloc, showing a general and uninterrupted process of rapprochement and the establishment of economic and cultural ties.⁸⁹ This work contributes to a better understanding of how such relations between Spain and the countries of Eastern Europe were established and presented to the public. As has been shown, far from there being a monolithic anti-communist discourse characteristic of the entire dictatorship period, this discourse evolved as Spanish foreign policy changed according to what was most convenient and beneficial to the dictatorship at any given moment.

Franco's regime maintained strict control over the media for almost forty years. However, the dictatorship underwent several ideological and political transformations during this time, which were reflected in the press. Specifically, the representation of Soviet science and technology in Spanish newspapers during Franco's dictatorship was influenced by different narratives. These narratives alternated between the regime's economic and commercial interests and its ideological principles—which paradoxically included anti-communism and the highly valued authority and discipline of Soviet authoritarianism. Indeed, these accounts underwent several transformations during the years of dictatorship and were modified to serve the interests of the regime, as was the case with other cultural products. A flexibility comparable to that of the United States, whose strategy, focused on maintaining the regime's valuable collaboration and preparing Spanish society to face the period after his disappearance, included technical assistance as well as scientific and educational exchange programs.⁹⁰

After the Spanish Civil War, scientific and technological news in Spanish newspapers were characterized by patriotic exaltation. In the 1950s, however, the narrative shifted to a defence of the scientific and technological contributions of the Western bloc. This was mainly due to agreements with the United States and the anti-communist stance taken by the dictatorship.

"The Scientific Periphery in Spain: The Establishment of a Biomedical Discipline at the Centro de Investigaciones Biológicas, 1956-1967," *Minerva* 35, no. 1 (1997): 27-45; Presas Puig, "Science on the Periphery"; Agustí Nieto-Galan, "A Puzzling Marriage? UNESCO and the Madrid Festival of Science (1955)," *History of Science* 60, no. 3 (2022): 383-404; Ana Romero de Pablos, "Atomic Technologies and Nuclear Safety Practices in Spain During the 1960s," *NTM* 30, no. 2 (2022): 197-221.

⁸⁹ Luis Suárez Fernández, *Franco y la URSS. La Diplomacia Secreta (1946-1970)* (Madrid: Rialp, 1987); Luis Lobejón Herrero, *España en el Comercio Este-Oeste, 1961-1991* (Valladolid: Universidad de Valladolid, 1999); Matilde Eiroa San Francisco, *Las Relaciones de Franco con Europa Centro-Oriental (1939-1955)* (Barcelona: Ariel, 2001); Martín de la Guardia and Pérez Sánchez, "Bajo la Influencia de Mercurio."

⁹⁰ See, for instance: Lorenzo Delgado Gómez-Escalonilla, "'After Franco, What?' La Diplomacia Pública de Estados Unidos y la Preparación del post-Franquismo," in *Claves Internacionales en la Transición Española*, coord. Óscar J. Martín García and Manuel Ortiz Heras, 99-127 (Madrid: Catarata, 2010); Lorenzo Delgado Gómez-Escalonilla and Oscar Martín García, "El Apoyo Internacional a la Reforma Educativa en España," *Historia y Memoria de la Educación* 14 (2021): 177-208.

However, attempts to re-establish and normalise trade relations with the Eastern bloc gradually led to a softening of the discourse that had condemned and rejected Soviet scientific and technological contributions.

The scientific and technological evidence, as well as the economic interests of the Franco regime, shaped the new discourses of the Spanish newspapers. Their narratives helped to depoliticise specific issues. In the late 1950s and 1960s, Spanish political leaders created new negotiation frameworks to seek new commercial allies, including the Soviet Union. The success of Russian scientists and engineers in fields such as nuclear energy and space sciences transformed the public image of Soviet science and technology. Even Franco himself endorsed this change, as evidenced by his speech in Cartagena after the launch of Sputnik. The narrative about foreign science and technology was developed and promoted through Spanish newspapers during this time. The purpose of this narrative was to serve the evolution, interests, and survival of the Franco regime.

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