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## Survival in a Nazi Concentration Camp: The Spanish Prisoners of Mauthausen

The fate of Spanish deportees at the Mauthausen Nazi concentration camp exemplifies the role of large historical forces in shaping individual destinies, in this case tragically. The typical prisoner at Mauthausen was a man exiled in France at the end of Spain's Civil War, who was either in a refugee camp, often with his family, or who had joined the French army worker battalions. When most of these exiled individuals were imprisoned after the German army invaded France in May 1940, Spain's new Francoist state refused to recognize them as Spanish citizens but not their women and children. As a result, these stateless exiles were sent to the Mauthausen concentration camp in successive waves from 1940 to 1941. Later in the war, hundreds of Spaniards charged with anti-German activities, mostly in France, also ended up in Mauthausen. From the first contingent entering the camp in August 1940 to the liberation on May 5, 1945, more than 7,000 so-called *Rote Spanier* (Red Spaniards) were interned at the camp. According to the most recent estimates, 66 percent of them lost their lives there.<sup>1</sup>

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1 Spanish women were deported to German concentration camps but not to Mauthausen. The numbers are not accurate because other camps did not record the presence of Spanish prisoners as well as did Mauthausen. According to the existing estimates, between 200 and 500 Spanish women were deported to German concentration camps, most of whom went to the Ravensbrück concentration camp. Montserrat Armengou and Ricard Belis, *Ravensbrück. L'Infern de les Dones* (Barcelona, 2007); Neus Català, *De la Resistència a la Deportación: 50 Testimonios de*

This article uses the case of Spanish prisoners in Mauthausen to examine the individual determinants of survival in contexts of indiscriminate or genocidal violence. The literature on this subject tends to focus on Jewish victimization during World War II, though it also explores other contexts of genocidal and political violence—Nazi victimization in general during World War II, post-World War II military conflicts, Soviet Gulags, and Bosnia-Herzegovina deaths during the war in Yugoslavia from 1992 to 1995. One conclusion of this growing literature about the demography of conflict and violence is that individual socioeconomic characteristics often affect individual survival chances. Other contributions have found that sometimes survival advantages accrue to those at the top of the social or organizational hierarchy in such conditions of high mortality as maritime disasters or the prisoner camps during the U.S. Civil War (though high-ranking POWs in Japanese camps had a greater probability of dying).<sup>2</sup>

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*Mujeres Españolas* (Barcelona, 1984). The association “Amical de Ravensbrück” has managed to identify only around 100 Spanish Ravensbrück deportees fully. For the rest, either the records are missing, or the association failed to locate the families. Spaniards charged with anti-German activities also went to Sachsenhausen, Neuengamme, Buchenwald, Aurigny, Ravensbrück, and Dachau. Montserrat Roig, *Els Catalans als Camps Nazis* (Barcelona, 2003), 784–785; Andres Kranebitter, *Zahlen als Zeugen: Soziologische Analysen der Häftlingsgesellschaft des KZ Mauthausen* (Vienna, 2014), 186.

2 For Jewish victimization, see Matthias Blum and Claudia Rei, “Escaping Europe: Health and Human Capital of Holocaust Refugees,” *European Review of Economic History*, XXII (2017), 1–27; Marnix Croes, “Holocaust Survival Differences in the Netherlands, 1942–1945: The Role of Wealth and Nationality,” *Journal of Interdisciplinary History*, XLV (2014), 1–25; Carolyn Ellis and Jerry Rawicki, “More than Mazel? Luck and Agency in Surviving the Holocaust,” *Journal of Loss and Trauma*, IXX (2014), 99–120; Evgeny Finkel, *Ordinary Jews: Choice and Survival during the Holocaust* (Princeton, 2017); Peter Tammes, “Jewish Immigrants in the Netherlands during the Nazi Occupation,” *Journal of Interdisciplinary History*, XXXVII (2007), 543–562; *idem*, “Survival of Jews during the Holocaust: The Importance of Different Types of Social Resources,” *International Journal of Epidemiology*, XXXVI (2007), 330–335; *idem*, “Surviving the Holocaust: Socio-Demographic Differences Among Amsterdam Jews,” *European Journal of Population*, XXXIII (2017), 293–318; Miriam Keesing, Tammes, and Andrew J. Simpinkin, “Jewish Refugee Children in the Netherlands during World War II: Migration, Settlement, and Survival,” *Social Science History*, XLIII (2019), 785–811; for all the Nazi victims at Mauthausen, Kranebitter, *Zahlen als Zeugen*; for military conflicts after World War II, Helge Brunborg and Ewa Tabeau, “Demography of Conflict and Violence: An Emerging Field,” *European Journal of Population / Revue Européenne de Démographie*, XXI (2005), 131–144; Brunborg and Henrik Urdal, “The Demography of Conflict and Violence: An Introduction,” *Journal of Peace Research*, XLII (2005), 371–374; for victims in Soviet Gulags, Stephen Blyth, “The Dead of the Gulag: An Experiment in Statistical Investigation,” *Journal of the Royal Statistical Society*, XLIV (1995), 307–321; for deaths in the 1992–1995 war in Yugoslavia, Tabeau and Jakub Bijak, “War-Related

Emphasis on individual determinants of victims' survival adds an important perspective to the attention commonly given to structural and intermediate causes of genocidal and mass violence. At the macro-level, victimization during World War II frequently depended on broad geopolitical trends or changes in state policy. Arendt, for instance, emphasized "statelessness" as one of the main predictors of the comprehensive extermination of Jewish national groups. "Stateless" Spanish Mauthausen prisoners shared the same fate as other groups in that situation, especially many European Jews, who were quickly deported and murdered at the camps. Moreover, broad ideological and cultural constructs like fascism, communism, or antisemitism are usually regarded as significant factors in prisoners' fates. The Red Spaniards who fled Spain after their defeat in the civil war were subject to murderous eradication under the German fascist regime.<sup>3</sup>

Political militancy largely determined the collective reaction of Spaniards to their brutal treatment at the hands of the German state. The past link to Spain's Republican Army that many prisoners shared suggests the importance of ideology, political networks, and pre-existing institutions to survival. These networks were able to persist because most of the Spanish prisoners were sent to Mauthausen where they overwhelmingly lodged in the

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Deaths in the 1992–1995 Armed Conflicts in Bosnia and Herzegovina: A Critique of Previous Estimates and Recent Results," *European Journal of Population / Revue Européenne de Démographie*, XXI (2005), 187–215.

For maritime disasters, see Bruno S. Frey, David A. Savage, and Benno Torgler, "Interaction Natural Survival Instincts and Internalized Social Norms Exploring the Titanic and Lusitania Disasters," *Proceedings of the National Academy of Sciences of the United States of America (PNAS)*, CVII (2010), 4862–4865; *idem*, "Behavior under Extreme Conditions: The 'Titanic' Disaster," *Journal of Economic Perspectives*, XXV (2011), 209–221; for U.S. soldiers interned in Japanese prisoner camps, Clifford G. Holderness and Jeffrey Pontiff, "Hierarchies and the Survival of Prisoners of War during World War II," *Management Science*, LVIII (2012), 1873–1886; for social capital and survival in POW camps during the U.S. Civil War, Dora L. Costa and Matthew E. Kahn, "Surviving Andersonville: The Benefits of Social Networks in POW Camps," *American Economic Review*, XCVII (2007), 1467–1487.

3 Finkel and Scott Strauss, "Macro, Meso, and Micro Research on Genocide: Gains, Shortcomings, and Future Areas of Enquiry," *Genocide Studies and Prevention: An International Journal*, VII (2012), article 7, available at <https://scholarcommons.usf.edu/gsp/vol7/iss1/7/>. Hannah Arendt, *Eichmann in Jerusalem: A Report on the Banality of Evil* (New York, 2006; orig. pub. 1963), 164–165, 182. For the importance of statelessness in the Spanish deportation experience, see Josep Maria Lluró, "Experiència Incommensurable: Una Lectura de K. L. Reich de Joaquim Amat-Piniella," in *Història, Memòria, Testimoniatge: Un Llegat per a Europa* (Palma de Mallorca, 2011), 85.

same barracks. Pike, a leading expert about Spaniards' deportation experiences, wrote that "a non-Spanish witness, Michel de Boüard, has said of the Spanish collective that it alone, up until 1943, had the character of a solid organization on which communists joined with anarchists, socialists and republicans." The support and resistance networks of the Spanish prisoners who had been leftist militants and, in many cases, fighters in the civil war, were highly functional, despite the extreme hardship that these men underwent. According to one testimony, "Every prisoner convoy reaching the camp had a directorate of members of the Spanish Communist Party (PCE) or the Unified Socialist Party of Catalonia (PSUC)."<sup>4</sup>

The prisoners' identities as anti-fascist militants precluded any cooperation with the Nazi authorities. The historical evidence points at only a few instances of open collaboration with Nazi captors. Non-collaboration was manifest at the very end of their stay at the camp, when the Germans gave the Spanish group the opportunity to join them in fighting the Soviet army; the Spanish prisoners collectively refused. Nonetheless, Spaniards were spared the high mortality levels that other prisoner groups suffered as the liberation of the camp approached.<sup>5</sup>

4 Finkel and Strauss, "Macro, Meso and Micro," 59; Joaquim Amat-Piniella, *KL Reich* (Barcelona, 2007; orig. pub. 1963), 123; Roig, *Catalans*, 229, 231–233, 474; Carlos Hernández de Miguel and Ioannes Ensis, *Deportado 4443: Sus Tuits Ilustrados: La Historia de los 9,300 Españoles Cautivos en Campos de Concentración Nazis* (Barcelona, 2017), 47, 139; David Wingate Pike, *Spaniards in the Holocaust, the Horror on the Danube* (London, 2000), 113. Previous military or underground resistance experience can be a powerful predictor of resistance and underground activities in genocidal contexts. See Charles King, "Can There Be a Political Science of the Holocaust?" *Perspectives on Politics*, X (2012), 334; Finkel, *Ordinary Jews*, 12.

5 One case of open collaboration involved José Pallejà Caralt, who went to trial in a military court in Toulouse for crimes during his time as *kapo* (a prisoner appointed as an administrator or supervisor at the camp) (Pike, *Spaniards*, 60–62). Five other Spaniards were tried, one of whom was acquitted for lack of evidence. Carlos Flor de Lis was lynched by Spanish prisoners after liberation (Amat-Piniella, *KL Reich*, 57, 510–11; Roig, *Catalans*, 435). Enrique Tomás Urpí was shot by the son of one of his victims on May 5, 1945 (liberation of the camp). For a *kapo* with the nickname of "Asturias," who terrorized inmates in Gusen, see Hernández de Miguel and Ensis, *Deportado 4443*, 143. Four other less known cases include two *kaapos* known as "Málaga" and "Tirillas," as well as Ramon Vergé Armengol and Vicent Ripollès Gregori. The most ambiguous case is that of Orquín. Though he saved hundreds of prisoners under his command, he could also be brutal. A Spanish Communist cell at Mauthausen accused him of denouncing participants in underground activities. After liberation, he fled to Austria and then migrated to Argentina. For a balanced depiction, see the character "August" in Amat-Piniella, *KL Reich*; for a sarcastic take on the offer to fight the Soviets, critical of Spaniards' ability to resist the Waffen ss, *ibid.*, 476–483; Eduardo Pons, *El Holocausto de los Republicanos Españoles: Vida y Muerte en los Campos de Exterminio Alemanes (1940–1945)* (Barcelona, 2005), 273; for the temporal evolution of mortality at Mauthausen, Kranebitter, *Zahlens als Zeugen*, 178.

Any narrative about the Spaniards' capacity to organize, however, must reckon with the sobering fact that their overall mortality rates were probably higher than those of any other group of prisoners except the Jews'. According to the Mauthausen Memorial, the mortality rate of Mauthausen's 185,000 inmates was around 50 percent; the Spaniards' mortality rate was 66 percent. Only the Dutch prisoners' were higher—76 percent of its 1,780 inmates, most of them Jews. National group comparisons, however, mask differences in the timing of the lethal violence. Spanish prisoners had the highest mortality rate from 1940 to 1942, but after 1942, their mortality rates dropped. The mortality rate of Spanish prisoners who entered the camp in 1940/1 and survived until December 31, 1942, was 15 percent in 1943 and around 10 percent in 1944 for those who had survived until December 31, 1943. Spanish survival chances improved after 1943, though those of other national groups were equally bad or worse. For example, stateless Italians—mainly anti-fascist militants, partisans, soldiers, and Jews—experienced mortality rates close to 60 percent. Prisoners from the Soviet Union, probably soldiers, had mortality rates of around 50 percent. Czech nationals, including early political arrivals from October 1941 onward—primarily Jews from Auschwitz in 1944 and 1945—had mortality rates close to those of the Spaniards (63 percent).<sup>6</sup>

In contrast to these general statistics, oral histories and Mauthausen survivor biographies tend to focus on individual and collective agency in the extremely limited space that the German extermination machinery permitted. The survivor literature stresses the “coping” strategies and underground activities of prisoners in key positions at the camp (the so-called *Prominenten*), in most cases supplying food and giving protected jobs to friends or comrades.

Friendships occupy a prominent role in the survivor literature. “Amat and I, we were inseparable,” said one prisoner. Prisoner ties must have been particularly strong in the various cases of fathers and sons deported in the so-called *Angoulême* convoy of August

6 Kranebitter, *Zahlen als Zeugen*, 186. For the prisoner groups, see <https://www.mauthausen-memorial.org/en/History/The-Mauthausen-Concentration-Camp-19381945/Groups-of-Prisoners>. Deportations of Jews from the Netherlands started with stateless Jews, generally refugees from Germany. Arendt, *Eichman*, 167. For the arrival of Dutch Jews to Mauthausen, see Amat-Piniella, *KL Reich*, 195–196.

1940, one of the first recorded mass transportations of civilians to German concentration camps.<sup>7</sup>

Death, terror, disease, physical exhaustion, and terror probably decimated networks and other social relationships. Abundant evidence in the survivor biographies and the oral histories indicates, however, that some solidarity networks persisted. In the survivor narratives, access to sheltered jobs in the main camp and in *kommandos* (detachments of working prisoners) outside it is the most common explanation for prisoner survival. This article approaches these micro-aspects of survival at the camp by arguing that individuals' demographic characteristics—especially their social class—were an important predictor of (the low) survival probabilities of Spanish prisoners at Mauthausen. Survival was linked to individual characteristics, including occupations and social rank. Our hypothesis, however, does not exclude the role of networks in survival. In fact, one mechanism through which social class determined survival involved the participation in networks controlling access to sheltered jobs, extra food, and better lodging. Unfortunately, the data herein do not permit an analysis of which networks mattered for survival.<sup>8</sup>

This article leverages the high-quality data about Spanish prisoners in Mauthausen to assess the extent to which the social class—as well as the age, marital status, and religious self-identification—of Spanish prisoners determined their survival at the camp. This analysis is enabled by combining individual records of the duration and outcome of imprisonment with *Schutzstaffel* (SS) records of the

7 For agency in the midst of the Holocaust, see Laia Balcells and Daniel Solomon, “Violence, Resistance, and Rescue during the Holocaust,” *Comparative Politics*, LIII (2020), 161, 179–180; for “coping” and “resistance” strategies, as well as “cooperation” and “collaboration,” Finkel, *Ordinary Jews*, 7. Balcells and Solomon, “Violence.” Roig, *Catalans*, 339; for other cases, Mercedes Vilanova, *Mauthausen, Después: Voces de Españoles Deportados* (Madrid, 2014), 99–101. Les Alliers detention camp near Angoulême (France) deported 927 Spanish women, children, and men to Mauthausen. The women and children were then sent to Spain, while 430 boys and men remained at Mauthausen, of whom only seventy-three survived. For the fathers and sons—for example, the Alcubierre, Cortés, Ferrer, Quesada, Roca, and Sarroca families—see Roig, *Catalans*, 92–102; Pons, *Holocausto*, 258–263; Hernández de Miguel and Ensis, *Deportado 4443*, 98–99.

8 For examples of inmates' fear of being denounced by other prisoners, see Vilanova, *Mauthausen*, 101–106; for the de-humanization of the camps and the “de-construction of social norms,” Jelena Subotić, “Ethics of Archival Research on Political Violence,” *Journal of Peace Research* (2020), available at doi:10.1177/0022343319898735.

pre-war characteristics of individual deportees. The Spanish prisoners provide an excellent test case for the connection between class and death in the camp, because, as a contingent composed mainly of civilians capable of comparison with other national groups, it displays substantial variation in age, place of birth, and especially social class and pre-war profession. This study therefore makes an important contribution to the literature about the socio-economic determinants of survival in contexts of indiscriminate, mass violence.

SPANISH PRISONER RECORDS AT MAUTHAUSEN Extensive and detailed information about Spanish prisoners at Mauthausen has survived thanks to the bravery, cunning, and competence of three Spanish prisoners—Casimir Climent, Josep Bailina, and Joan de Diego. While maintaining the registry of Spanish prisoners at the behest of the Germans, they also managed to hide copies of their lists and files from the camp administrators. Immediately after the liberation, Bailina and other prisoners conducted a thorough compilation of the surviving documents, thus reconstructing “more than 85 percent of what happened [to Spanish prisoners] in the Mauthausen camp.” Based on this material and available publications, Bermejo and Checa compiled the *Libro Memorial: Españoles deportados a los campos nazis (1940–1945)* [Memorial Book: Spaniards Deported to Nazi Camps (1940–1945)], which provides the primary data for the research herein.<sup>9</sup>

The first step in the construction of our database was to copy the data for all of the cases of deportees included in the Ministry of Culture website—full name, date of birth (DoB), municipality of birth, province, *Stalag* (prison) in which the inmate spent time before deportation to Mauthausen, deportation date, prisoner number, final destination, and final outcome (liberation or death). Given that most Spanish prisoners were held in the Mauthausen

9 Benito Bermejo and Sandra Checa, *Libro Memorial: Españoles Deportados a los Campos Nazis* (Madrid, 2006), 26. The sources for Bermejo and Checa, *Libro Memorial* include Fondation pour la Mémoire de la Déportation, *Livre-Mémorial des Déportés de France Arrêtés par Mesure de Répression et dans Certains par Mesure de Pésécution, 1940–1945* (Paris, 2004), 4v. For information about each deportee provided in an online search engine, see <https://pares.mcu.es/Deportados/servlets/ServletController?accion=2&opcion=10>. Spain’s Ministry of Culture and Sport eventually made the full content of the *Libro Memorial* available online.

complex and that information from the camp is especially good, we restricted our analysis to the prisoners there. Kranebitter sets the number of registered Spanish prisoners at Mauthausen at 7,249. Bermejo and Checa provide information about 6,660 inmates, 92 percent of the registered prisoners—a value higher than Bailina’s estimate that the records cover about 85 percent “of what had happened in the Mauthausen camp.” Moreover, the preserved records show no survivor bias. In fact, the death rate of the preserved records is slightly greater than the mortality rate calculated for the whole group of Spanish prisoners at Mauthausen (with and without surviving individual records).<sup>10</sup>

From Bermejo and Checa’s lists of prisoners, we use the dates of arrival and exit (dead or alive) of each prisoner to reconstruct the total inflows and total prisoner numbers at each point in time. Figure 1 shows the flow of entrants into Mauthausen. The Spanish population held at the camp rose in three waves, as prisoners arrived from German detention camps—the first wave in July–August 1940, the second around January 1941, and the third around June 1941. At one point, a maximum of about 5,500 Spanish prisoners were alive in Mauthausen.

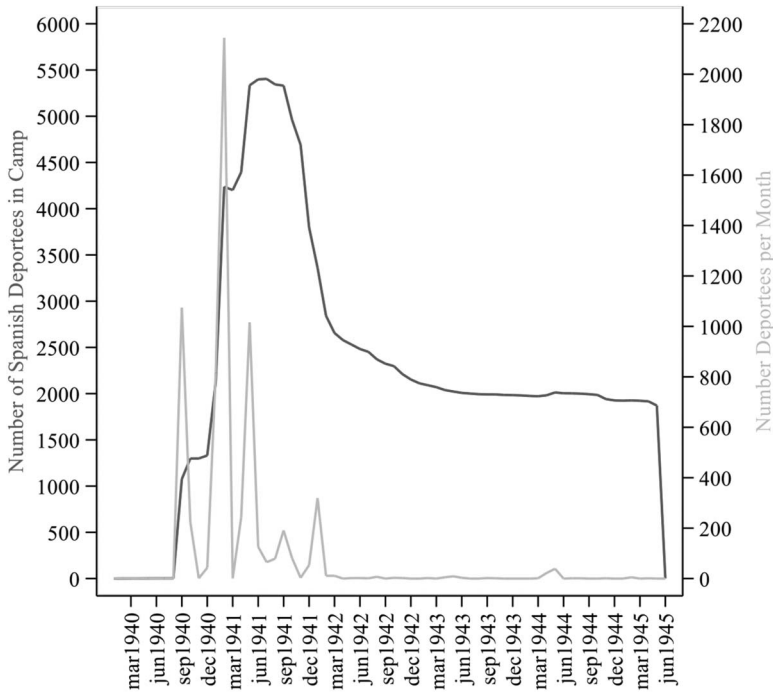
From November to December 1941, the Spanish population at the camp declined by almost 3,000 prisoners, despite new convoys reaching the camp in the last months of 1941. This period witnessed the largest systematic extermination of Spanish prisoners. Of the 5,331 Spaniards still in the camp on September 1, 1941, 59.4 percent had died by March 31, 1942. The population declined throughout 1942, stabilizing at 2,000 or so until liberation. Only small new contingents arrived in 1943, 1944, and 1945, generally *Nacht und Nebel* prisoners who had participated in resistance activities against the German army.

The individual records allow us to calculate time of entry to the camp by social class and the age distribution of different social classes. Table 1 displays the distribution, by percentage, of entry years according to social class. Class is clearly related to date of entry in Mauthausen: Elite and lower middle-class prisoners commonly arrived in Mauthausen earlier than unskilled manual and agricultural workers. More than 42 percent of elite and lower middle-class

10 Kranebitter, *Zahlen als Zeugen*, 186.



Fig. 1 Total Number of Spanish Deportees and Monthly New Arrivals, 1940–1945



Spaniards and between 27 and 32 percent of unskilled workers had already entered the camp in 1940. The age differences are smaller between social classes than between years of entry. In fact, age does not display a clear linear association with social class at all (Table 2).

Individual records also allow us to calculate the monthly mortality rate for Spanish prisoners. We define *mortality rate* as the number of deaths each month, divided by the Spanish prisoner population on the first day of the month. Figure 2 shows high mortality rates from June 1941 to June 1943, with a peak in November/December 1941 and January/February 1942 (precisely when the Spanish prisoner population lost 3,000 inmates). In this period, nearly 20 percent of the Spanish prisoner population died each month. The mortality rate for 1940, however, is lower than the aggregate mortality rates of Mauthausen, estimated to be 24

*Table 1* Year of Entry in Mauthausen by Social Class (Percentage)

YEAR OF ENTRY	ELITE & LOWER MIDDLE CLASS	SELF-EMPLOYED	SKILLED WORKERS	UNSKILLED MANUAL WORKERS	UNSKILLED AGRICULTURAL WORKERS	TOTAL
1940	42.19	35.76	32.45	31.68	27.08	32.29
1941	55.27	63.93	64.86	67.15	71.5	65.96
1942	0.42	0	0.7	0.49	1.14	0.61
1943	1.69	0.1	0.56	0	0	0.32
1944	0.42	0.2	1.22	0.58	0.28	0.71
1945	0	0	0.22	0.1	0	0.11
Total	100	100	100	100	100	100

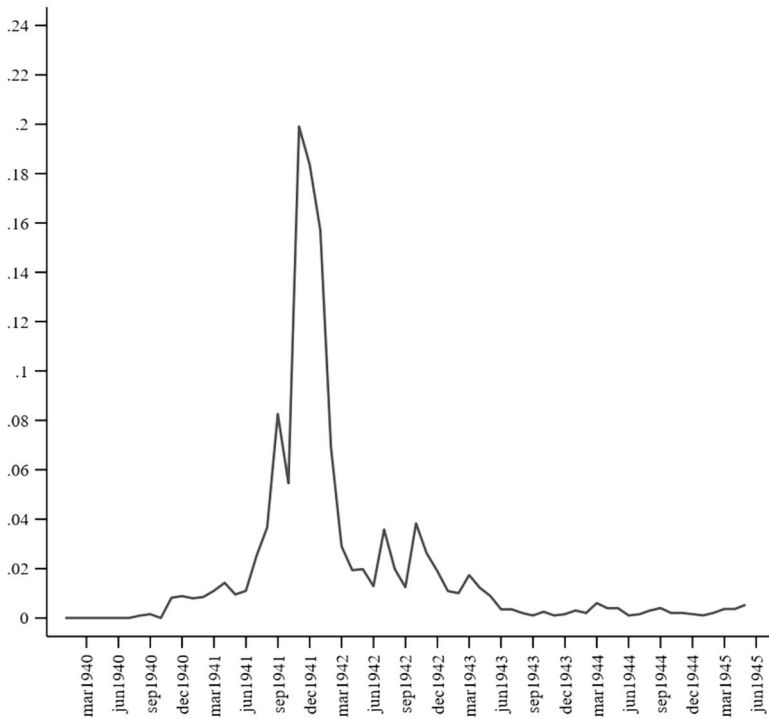
NOTES Pearson  $\chi^2(20)=88.0727$ ;  $Pr=0.000$ .

*Table 2* Age at Entry into Mauthausen by Social Class (Percentage)

AGE OF ENTRY	ELITE & LOWER MIDDLE CLASS	SELF-EMPLOYED	SKILLED WORKERS	UNSKILLED MANUAL WORKERS	UNSKILLED AGRICULTURAL WORKERS	TOTAL
14-24	16.36	26.06	21.41	18.9	18.39	20.99
25-34	50.45	47.76	50.82	50.54	51.2	50.29
35-44	21.82	19.91	22.09	23.76	24.14	22.38
45-74	11.36	6.26	5.68	6.8	6.27	6.34
Total	100	100	100	100	100	100

NOTES Pearson  $\chi^2(12)=34.9820$ ;  $Pr=0.000$ .

Fig. 2 Monthly Death Rate of Spanish Prisoners in Mauthausen



Note: Cases still in the camp after 5/5/1945 excluded as probable errors

NOTE Cases still in the camp after May 5, 1945, were excluded as probable errors.

percent in 1939 and 76 percent in 1940. By mid-1943, the mortality rate of Spaniards fell substantially, as ss attention switched to other prisoner groups (Russians or Italians). Spaniards were also spared from mass murdering in the spring of 1945.<sup>11</sup>

When we divide cohorts by year of entry, we can see a break in the murderous intensity of the camp, in line with decisions taken in September 1942 to reduce the mortality rates of some groups so as to use them in arms production. Table 3 displays the mortality rates per year of entry into the camp and the mortality rates at different stages given survival until 1943 and 1944. Prisoners entering the camp in 1940, 1941, and 1942 underwent mortality rates greater

11 Ulrich Herbert, "Labour and Extermination: Economic Interest and the Primacy of Weltanschauung in National Socialism," *Past & Present*, 138 (1993), 155; Marc Buggeln, *Slave Labor in Nazi Concentration Camps* (New York, 2014), 61.

Table 3 Conditional Mortality Rates for Cohorts of Prisoners by Year of Entry

YEAR	COHORT SIZE	DEATH RATE
1940	2,158	0.771
1941	4,388	0.697
1942	36	0.667
1943	24	0.083
1944	69	0.116
1945	102	0.118
YEAR	SURVIVED UNTIL 1943	DEATH RATE, 1943–1945
1940	582	0.15
1941	1,556	0.145
1942	24	0.5
YEAR	SURVIVED UNTIL 1944	DEATH RATE, 1944–1945
1940	548	0.097
1941	1,446	0.08
1942	18	0.334

NOTES Death rates are authors' elaboration using the list of prisoners in Benito Bermejo and Sandra Checa, *Libro Memorial: Españoles Deportados a los Campos Nazis* (Madrid, 2006). The number of survivors until 1943 is the number of prisoners still alive on December 31, 1942, and the number of survivors until 1944 calculated as the number alive on December 31, 1943.

than 65 percent. The cohort that entered the camp in 1940 had a staggering death rate of 77 percent. Although the number of new deportees diminished after 1942, mortality rates fell to almost 10 percent for the cohorts of Spanish prisoners who arrived in 1943, 1944, and 1945. For survivors of the 1940, 1941, and 1942 entry cohorts, survival probabilities from 1943 onward were much higher. For example, the mortality rate of the 582 inmates of the 1940 cohort who survived until January 1, 1943, was 15 percent from 1943 to 1945, as was that of the 1941 cohort. The 1942 cohort had high mortality rates, but it was a particularly small cohort. Kranebitter's descriptive statistics of mortality rates by nationality show that the German, Poles, Spaniards, and Russians had different peak rates.<sup>12</sup>

Having established the broad patterns regarding the Spanish prisoner population at the camp, we complement our data set with information extracted from the Arolsen Archives. It contains copies of original documents from the camp—registry-office cards, prisoner-registration cards, labor-assignment cards, and death certificates,

12 Buggeln, *Slave Labor*, 20, 27–32; Kranebitter, *Zahlen als Zeugen*, 194.

among other records—with highly relevant additional information, namely, occupation, religion, and marital status. Unfortunately, neither of our sources specifies level of education. Alternative sources that might include it, such as Spain's 1931 population census, are not yet in a digital format. We copied the occupation, religion, and marital status information verbatim. Given the small number of nonreligious individuals or Protestants, we distinguish only between Catholics and others. Similarly, due to the limited number of widowed prisoners, we distinguish only between single and “other” status. Since less than 1 percent of all deportees to Mauthausen were women, we do not include the gender of prisoners in the analysis.<sup>13</sup>

To assign the 317 occupations of the Spanish deportees to social classes, we consulted the historical international classifications of occupations (HISCO) and the International Institute of Social History. None of the deportees were coded as “unemployed.” Based on the HISCOs, we placed all the cases into social classes according to the HISCLASS scheme designed by van Leeuwen and Maas. One important complication in the process of assigning HISCLASS values involves the categorization of “unskilled workers.” Van Leeuwen and Maas suggest equating them with “unskilled farm workers” or “unskilled non-agricultural workers,” depending on the salience of agriculture in the region. In line with this approach, the database of Spanish deportees includes *Arbeiter* (unskilled worker) and also a substantial number of *Landarbeiter* (rural laborers), typically also unskilled. Hence, we infer that the latter cases belong with “unskilled farm workers” and the former with “unskilled non-farm workers.”<sup>14</sup>

The HISCLASS scheme identifies twelve classes. However, due to the small number of cases in several of them (for example, “higher managers” and “elite”), we collapse several groups. Our final typology identifies five classes: (1) elite and lower middle class, (2) self-employed and farmers, (3) skilled workers, (4) unskilled workers, and (5) unskilled farm workers. The most common occupations among these classes were working proprietor in wholesale or retail trade (elite and lower middle class), farmer

13 For the search engine of the International Center on Nazi Persecution, see <https://collections.arolsen-archives.org/search/>.

14 Marco H. D. Van Leeuwen and Ineke Mass, *HISCLASS: A Historical International Social Class Scheme* (Leuven, 2011).

(self-employed and farmers), bricklayer (skilled workers), *Arbeiter* or worker (unskilled workers), and rural laborer (unskilled farm workers).

A question that arises is whether prisoners reported their real previous occupations before entering the camp. Prisoners may well have quickly learned which skills were in greater demand and therefore offered greater probabilities of survival. Many survivor memoirs note that prisoners lied about their occupation to enter one of these highly valued, protected positions. From this evidence, the more veteran prisoners likely told new arrivals to declare such valued occupations as stonemason or blacksmith.

Given the obvious survivor bias in the oral histories and survivor memoirs, however, lying about one's occupation could hardly have been a general strategy. Being caught in such a deception because of an inability to perform the task at hand meant risking torture or death. Moreover, prisoners might not have had all the relevant information when entering the camp. As Buggeln contends, "For many years, it was assumed that the entries in prisoner files could not be trusted with regard to occupational information. Now, however, there are increasing indications that the prisoners did not realize that indicating a skilled profession could have been beneficial for them." In the Neuengamme camp that Buggeln studied, apparently only 9.2 percent of prisoners declared an occupation in the ss prisoner cards at the ss *Wirtschafts-Verwaltungshauptamt* (WVHA, the ss Economics and Administration department). Yet, the much more detailed and comprehensive record of professions in the death registry of the Neuengamme camp suggests that at some point, German authorities carefully documented prisoners' professions.<sup>15</sup>

In the files preserved at the Arolsen archives, we discovered the occupations of slightly more than 5,800 Spanish prisoners. Some of the missing ones are due to names that do not match those in the Bermejo–Checa database and others because they lack a recorded occupation. Around 60 percent of prisoners with a match declared occupations that did not clearly increase the chance of survival. About 20 percent of such prisoners were agricultural laborers, 18 percent unskilled laborers or workers, and more than 60 percent

15 Buggeln, *Slave Labor*, 92–93.

self-employed before the war or in service positions. A tiny minority were physicians, lab technicians, veterinarians, teachers, or clerks. The large share of occupations that did not guarantee survival supports the idea that the recorded occupations of Spanish prisoners were reasonably accurate.

Survivor biographies and oral histories allow us to cross-check individual data. A prisoner from Vinaroz (born in 1919), who was a seaman before the civil war, recounts being helped by a friend, a veteran prisoner from the same town, who advised him “not [to] say that you are a seaman because the only sea there is in here is the Danube. Instead, you should say that you are stonemason.” Apparently, the new inmate did indeed tell the camp authorities that he was a good stonemason (“*Steinmetz, Steinmetz, gut, gut*” was the refrain), though his Mauthausen record in the Arolsen archives lists him as a *Matrose* or seaman. According to Legineche, another prisoner, whose family worked the land but was about to join the ship *Ciudad de Cádiz* as a cabin boy before the start of the civil war, was classified as a seaman in the Arolsen records.<sup>16</sup>

We performed this cross-examination with several other prisoners whose pre-war occupation we know. Josep Cabrero Arnal, who was murdered at the camp hospital with a lethal injection, was a cartoonist before the war. In the camp records, he appears as a *Zeichner* or illustrator. Joaquim Amat-Piniella, the author of a semi-autobiographical novel about the experiences of the Spanish group in Mauthausen, appears in the records as a *Lehrer*, or teacher, hardly an occupation guaranteeing survival. César Orquín, a charismatic kapo, born in 1917, was listed as a student; he probably had not finished his university degree when the civil war erupted. Joan de Diego, a secretary at the camp and one of the prisoners who hid and preserved the Mauthausen records, was an office clerk identified as an *Angestellter*, or clerk, on his Mauthausen card. Jesús Dalmau, a clerk at the Pirelli company before the war, appears as an *Angestellter* in his prisoner files.<sup>17</sup>

16 Vilanova, *Mauthausen*, 80–81; Manuel A. Legineche, *El Precio del Paraíso: De un Campo de Exterminio al Amazonas* (Barcelona, 2016), 87.

17 For an in-depth study of Orquín, see Ernest Gallart, *El Kommando César: Los Republicanos Españoles en el Sistema Concentracionario del KL Mauthausen* (Madrid, 2011). Rosa Toran, *Joan de Diego: Tercer Secretari de Mauthausen* (Barcelona, 2012), 52–53; Roig, *Catalans*, 477–478. In Roig’s book, the prisoner’s name is Jesús Dalmau, whereas in the Arolsen archives, the



Three key Spanish prisoners worked in the camp's identification room (*Erkennungsdienst*) as photographers, saving thousands of photographic negatives that provided critical identification of German war criminals in the Nuremberg trials. Francesc Boix (Barcelona, 1920)—a member of the Catalan Communist youth movement with brothers Joaquín (also a Mauthausen survivor) and Gregorio López Raimundo—provided a critical identification of Ernst Kaltenbrunner, a Gestapo chief sentenced to death, at Nuremberg. Boix appears in the Arolsen archive as an “Arbeiter,” though he had not yet turned sixteen when the civil war started. An amateur photographer, he apparently published some pictures during the war in magazines of Communist youth groups. José Cereceda (Madrid, 1913) and Antonio García Alonso (Tortosa, 1913), the other two photographers who worked in the identification room, were clearly professional photographers before the war, identified on their individual cards as *Fotograf*.<sup>18</sup>

Two prisoners, who were surely rural laborers before the civil war, appear as *Landwirt* (agricultural workers) and *Landarbeiter* (rural workers) in their respective Mauthausen cards. In a compilation of oral testimonies, a survivor explained how he came at the camp to regret his lack of a proper trade. When cross-checked with the Arolsen cards, this survivor shows up as an unskilled Arbeiter. By contrast, prisoners in secure jobs at the camp acquired the requisite skills before entering the camp. One, a *Zimmerman*, or carpenter, before Spain's civil war, appears as such on his individual card in the Arolsen records. Another, an *Elektriker*, or electrician, was registered as one on his Mauthausen card. The same is true of a prisoner who worked as a *Schmied*, or blacksmith, before the civil war. Julio Casabona (born, 1919), who, with his father, took care of *Kommander* Franz Zeireis' pigsty, was a veterinary student before

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name is Jesús Colom-Dalmau. The prisoner could be traced because his Mauthausen death certificate names him Jesús Dalmau-Colom and gives his birthplace as Manresa (province of Barcelona) in 1916.

18 For information about Boix and the other two photographers, see <https://www.barceloninsdeportats.org/es/122/boix-campo-francesc/biografia.html>; Bernejo, *El Fotógrafo del Horror: La historia de Francisco Boix y las Fotos Robadas a los SS de Mauthausen* (Barcelona, 2015). Cereceda was a Communist militant from Madrid who also had been a professional dancer (*ibid.*, 175). For the best account of García Alonso's placing in the identification room of the camp, see Pike, *Spaniards*, 133–143, which also tells of the García Alonso's family photography lab in the city of Tortosa and reveals that Boix did not know much photography, thus validating the Arbeiter status on his individual card.

the war and and a “*Tierärztl. Student*” on his Mauthausen individual card (presumably meaning *Tierärztliche Student*).<sup>19</sup>

**THE ROLE OF SOCIAL CLASS** In line with the literature on socioeconomic determinants of survival, the main expectation of this article is that survival depended on social class, as determined by previous occupation. Spanish prisoners who were members of the upper classes had a lower risk of death than did members of the lower classes. Social class might have affected survival probabilities in a number of different ways. First, camps and satellite work groups could have adopted a rigid social structure, following SS classification hierarchies. According to Buggeln, these classifications followed Nazi racial doctrines, the national origins of prisoners, and other criteria singling out political opponents or social groups deemed undesirable. The social structure of the camp was also duplicated within national or ethnic groups, privileging a class of prominent prisoners (*Prominenten*), generally kapos and valued workers over the mass of low-status prisoners (*Speckjäger* in German and *espechegas* in the Spanish vernacular). Survival probabilities varied dramatically between one group and the other; prominent prisoners had access to more food, better shelter and clothing, and relative immunity from arbitrary SS or kapo violence.<sup>20</sup>

Therefore, membership in, or the protection of, a group of prominent prisoners became a crucial determinant of survival. The most famous Spanish case involved 460 prisoners in a kommando at Vöcklabruck who were spared the terrible fate of their comrades during the period of highest lethality in 1941, thanks to Orquín’s leadership and protection. Orquín also saved lives later in Ternberg and in Schlier. Other typically shielded kommandos were those in charge of the registry of prisoner belongings, the kitchen staff (giving access to vital food), and the caretakers of camp commander Zereis’ pigsty. Writer Amat-Piniella was saved from death by his friend cartoonist Josep Arnal, who enjoyed a *Prominenten* position classifying prisoner belongings.<sup>21</sup>

19 Ximo Vidal and Carles Senso, *La Ignomínia de l’Oblit: Els Valencians de la Ribera als Camps d’Extermini Nazis* (València, 2016), 37–38; Vilanova, *Mauthausen*, 57; Vidal and Senso, *La Ignomínia*, 62. For the electrician and the blacksmith, see Vilanova, *Mauthausen*, 75. Pons, *Holocausto*, 259.

20 Buggeln, *Slave Labor*, 142; Vilanova, *Mauthausen*, 17; Bermejo, *El fotógrafo*, 120.

21 Gallart, *El Kommando César*, 149–232, 245–272; Vilanova, *Mauthausen*, 83–86; Pons, *Holocausto*, 258–263.

Access to Prominenten status must have depended on a variety of factors, the most important being certain highly valued skills in a labor-scarce war economy. The ss owned the German Earth and Stone Works company that supplied building materials to the German state using Mauthausen prisoner labor. Later, the camp shifted to arms production, especially aircraft fuselages and soldiers' weapons (typically carbines and machine guns). Hence, prisoners having construction and industrial skills would seem to have had a higher chance of survival than prisoners in the unskilled and farm classes. From this perspective, prisoners with middle- and upper-class status employed in such skilled occupations as teaching might not have had a survival advantage over unskilled workers.<sup>22</sup>

A second version of the skill-scarcity thesis involves occupations in the service sector, like administration, entertainment, or personal grooming (barbers or hairdressers), which appears to have been in some demand among ss commanders and their families. Manuel Carmona (Jódar, 1899) and Joan Pagès Moret (Palamós, 1917) both entered the camp as *Friseur* (hair stylists). Carmona's status as one of Ziereis' personal barbers must have meant that he was highly skilled. Pagès also had been president of the barber's union of the socialist General Workers' Union and a founder of the Catalan Communist Party (PSUC). Ramon Verge Armengol (Barcelona, 1915), a *Laborant*, or lab technician, was employed at the *Revier* (camp hospital), where lethal injections were delivered to sick prisoners. Recall also the Casabona family of veterinarians employed in the camp's pigsty.<sup>23</sup>

The linguistic skills and other learned capacities usually correlated with social class and occupation also mattered. The ability to speak German was a vital advantage at the camp. Diego and Orquín, two of the most prominent Spanish prisoners at the camp, both survivors, quickly learned German. These two men also were more educated than the average Spanish prisoner. Orquín had a university degree and a musical background. Diego had attended an experimental Montessori school in Barcelona, worked as an apprentice at a pharmacy, and at sixteen or seventeen years old became a clerk

22 Adam Tooze, *The Wages of Destruction: The Making and Breaking of the Nazi Economy* (London, 2007), 513–561; Mark Mazower, *Hitler's Empire: Nazi Rule in Occupied Europe* (London, 2008), 294–318; Herbert, *Hitler's Foreign Workers: Enforced Foreign Labor in Germany under the Third Reich* (New York, 2006).

23 Pons, *Holocausto*, 259.

at a business in Barcelona. Francesc Boix, another prominent prisoner, who was a high-school student in central Barcelona before the war, also learned to speak German fluently. In line with this anecdotal evidence, contemporary sociological research shows that upper-class individuals were more prone to learn new languages.<sup>24</sup>

Finally, social class is correlated with an intensive participation in support networks among prisoners. The literature about the Spaniards' experiences at the camp tells of a Communist resistance network that emerged in the summer of 1941, networks associated with rival political traditions like the anarchists, as well as others comprised of prisoners from the same Republican army unit, the same town, etc. Participation in these networks might have been more typical of urban workers from larger cities. Moreover, skilled workers in industry or services were probably more active in political or union-related networks. Hence, social class undoubtedly provided survival advantages, not only for skilled industrial and construction workers but also for workers in service industries or highly skilled professions.<sup>25</sup>

Although prisoners' social class is our main explanatory variable, several other variables related to individual characteristics are worthy of consideration, the most important one being date of birth. We expected age to have had a pronounced effect on survival rate. For one thing, SS physicians made their selection of prisoners deemed to be unfit for work largely on the basis of age. Second, older prisoners might have had greater difficulties staying alive in the brutal conditions of the camp (freezing cold, caloric intake close to starvation levels, and long hours doing exhausting work). However, the precise shape that the age–mortality gradient should take in this extremely challenging environment is unclear. The pertinent scholarship argues that famines affect

24 Vilanova, *Mauthausen*, 65, 66–68; Gallart, *Orquín*, 119, 120; Toran, *Joan de Diego*, 100, 53; Jürgen Gerhards, “Transnational Linguistic Capital: Explaining English Proficiency in 27 European Countries,” *International Sociology*, XXIX (2014), 56–74; Sören Carlson, Jürgen Gerhards, and Silke Hans, “Education of Children in Times of Globalisation: Class-specific Child-rearing practices and the Acquisition of Transnational Cultural Capital,” *Sociology*, LI (2017), 749–765.

25 Manuel Razola and Mariano Constante, *Triangle Bleu: Les Republicains Espagnols à Mauthausen 1940–1945* (Paris, 2001), 89–90; Vilanova, *Mauthausen*, 81–82. For clashes between the Communist group and the Anarcho-syndicalists, see Amat-Piniella, *KL Reich*, 464–465; for prisoners serving in the same military unit, Pons, *Holocausto*, 224; for those living in the same area, Roig, *Catalans*, 276, 477–478; for those with previous friendships, *ibid.*, 279.

mortality levels but do not necessarily determine the slope of the age–mortality relationship.<sup>26</sup>

**METHODS** This study’s attempt to ascertain the conditions that affected the risk of death in the camp entailed estimating event–history models. Such models identify changes in the hazard rate or the probability that an event will occur in a particular interval if it did not occur in the previous interval. Since the event of interest is death during imprisonment, the models reveal the determinants of the timing until the potential passing of the prisoner. Conversely, the survival rate represents the probability of remaining alive during a given period after the onset of the risk. We estimate Cox models, avoiding other models’ dichotomous outcomes—for example, logistic or probit regression, since they, unlike Cox models, would require us to define the parameters of the baseline hazard to avoid biases in the effect of independent variables of interest. All our models are estimated with Efron’s method for simultaneous events, which produces the most accurate approximation of the conditional probability. The date of entry to the camp marks the onset of the risk and the date of death or liberation the end of the risk.<sup>27</sup>

Several independent variables have substantial proportions of missing values, particularly the variables “Catholic” (40.4 percent of prisoners) and “single” (25.8 percent). Since this missing information is likely not at random, we have imputed missing values for all independent variables using ten sets of imputations as well as missing values for the dependent variables in the chained process, but we included only cases with complete information about the dependent variables in the final analyses. We address the issue of perfect prediction in categorical variables through the “augment” option in Stata. Table 4 shows basic descriptive statistics for all independent variables in the analysis with and without imputed missing values.<sup>28</sup>

26 Susan C. Watkins and Jane Menken, “Famines in Historical Perspective,” *Population and Development Review*, XI (1985), 647–675; John R. Speakman, “Sex- and Age-Related Mortality Profiles during Famine: Testing the ‘Body Fat’ Hypothesis,” *Journal of Biosocial Science*, XLV (2013), 823–840; Virginia Zarulli, “Effet des Chocs de Mortalité sur le Profil par Âge de la Mortalité des Adultes,” *Population* (French Edition), VXXVIII (2013), 303–329.

27 Mario A. Cleves, William W. Gould, and Yulia V. Marchenko, *An Introduction to Survival Analysis Using Stata* (College Station, 2016).

28 Brendan Halpin, “Multiple Imputation for Categorical Time Series,” *Stata Journal*, XVI (2016), 590–612.

RESULTS The empirical analysis proceeds in two steps that seek to reflect the evolution of prisoners during and after their sojourn at the camp. First, we address the socio-demographic profile of the deportees. Second, we examine the socio-demographic determinants of survival, which absorbs most of our attention.

Table 4 Descriptive Statistics for All Variables with and without Imputation

VARIABLE	N	MEAN	SD	MIN	MAX
WITHOUT IMPUTATION					
Duration	6,459	673.002	552.041	5	1925
Outcome - death	6,660	0.692	0.462	0	1
Age 14-24	5,920	0.2 <sup>23</sup>			
Age 25-34	5,920	0.496			
Age 35-44	5,920	0.220			
Age 45-74	5,920	0.060			
Elite and lower-middle class	5,815	0.042			
Self-employed and farmers	5,815	0.175			
Skilled workers	5,815	0.411			
Unskilled workers	5,815	0.183			
Unskilled farm workers	5,815	0.188			
Single	4,940	0.599	0.490	0	1
Catholic	3,969	0.887	0.316	0	1
Province	6,718	23.856	14.679	1	52
Year of entry	6,567	0.000	0.615	-0.725	4.274
WITH IMPUTATION					
Duration	6,459	673.002	552.041	5	1925
Outcome - death	6,459	0.705	0.456	0	1
Age 14-24	6,459	0.224			
Age 25-34	6,459	0.496			
Age 35-44	6,459	0.219			
Age 45-74	6,459	0.060			
Elite & lower-middle class	6,459	0.043			
Self-employed and farmers	6,459	0.174			
Skilled workers	6,459	0.412			
Unskilled workers	6,459	0.183			
Unskilled farm workers	6,459	0.188			
Single	6,459	0.619	0.486	0	1
Catholic	6,459	0.887	0.316	0	1
Province	6,459	23.862	14.689	1	52
Year of entry	6,459	-0.011	0.595	-0.726	4.274

NOTE Rather than providing the mean, standard deviation, and minimum and maximum value of the categorical variables age and social class, we present the proportion of each category. The *N* of the cases with imputation (6,459) is slightly larger than the *N* in Table 5 (6,454) because models in Table 5 were estimated excluding cases with the imputed dependent variable.

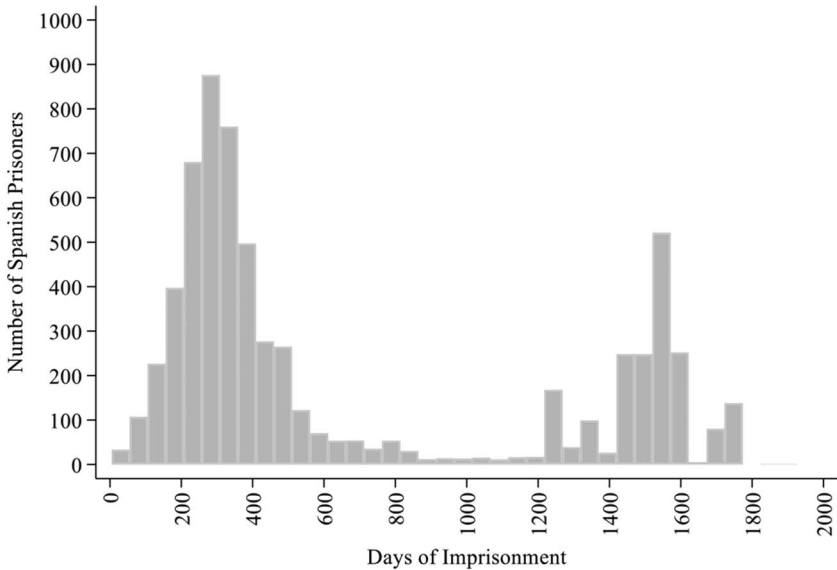
Table 4 provides critical information about the socio-demographic profile of Spanish deportees to Mauthausen. Spanish prisoners were more likely to be young than to be middle-aged or elderly, to be single than to be married or widowed, to be Catholic than to be atheist or Protestant, to be from the northeast or south of Spain than to be from other regions, and to be skilled than to be unskilled or highly skilled. The modal age group was twenty-five to thirty-four. As many as 88.73 percent of prisoners self-identified as Catholic and 60 percent as single when they entered the camp. Skilled workers clearly predominated (41.1 percent), followed by unskilled farm workers (18.80 percent), unskilled workers (18.31 percent), self-employed workers and farmers (17.5 percent), and lower middle-class and elite workers (4.2 percent). The proportion of the contingent from the northeastern regions of Aragon and Catalonia that share a border with France (34.25 percent of all cases) was substantially larger than the proportion of the population of these regions within Spain per se during the 1930s (16.08 percent). The highly populated region of Andalusia was also over-represented in the camp—19.95 percent of all prisoners as opposed to 17.27 percent of Spain's total population.

The average duration of imprisonment was 673 days, or 1.8 years. The standard deviation of this variable is high, indicating that duration of imprisonment differed substantially among Spanish deportees. One in every four remained imprisoned for more than three years (Figure 3). The starkest indication of the suffering that the Spanish inmates endured is their death rate, which was at the high end for Mauthausen—69.22 percent in the final sample.

Figure 4, which shows estimated survival rate depending on the duration of the imprisonment (that is, the probability of surviving another period) indicates that survival probability fell precipitously in the first 300 days, thereafter declining slowly until 2,000 days. Importantly, the fastest decline occurred between day 100 (.984) and day 300 (.896). From day 400 the probability continued declining but at a slower pace. Between day 400 and day 1,925, the probability declined from .465 to .283.

We now arrive at the core question driving this study: Was the probability of survival among Spanish deportees influenced by their socio-demographic characteristics? If violence perpetrated at the camp was conducted indiscriminately, socio-demographic characteristics should have had no effect. If, however, in line with

Fig. 3 Distribution of Spanish Inmates' Days of Imprisonment

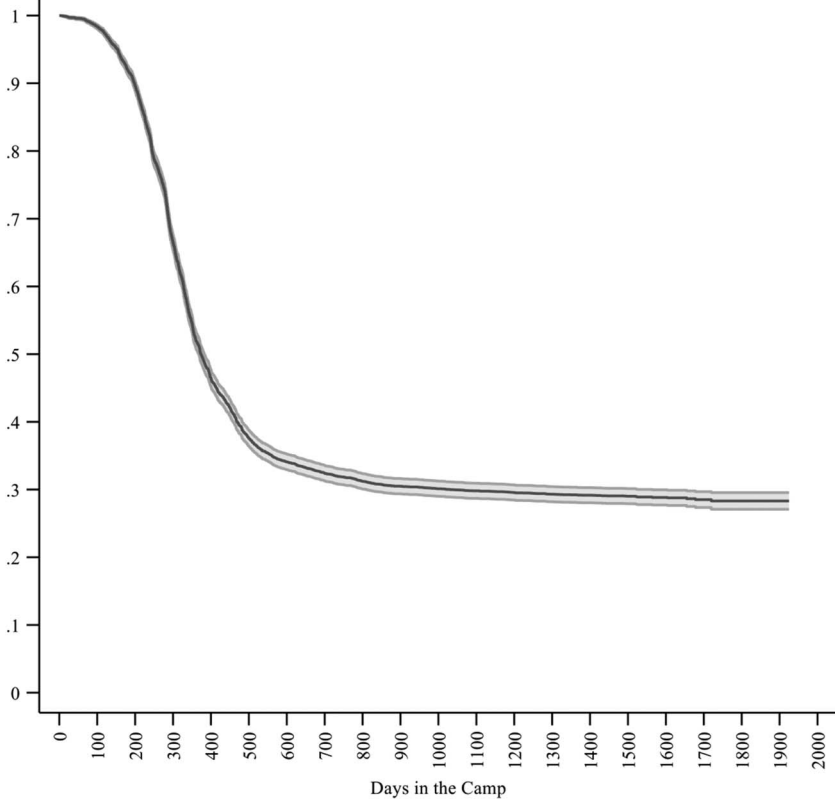


the emerging literature about the demographics of violence and conflict, survival depended both on the productive value of prisoners and their ability to minimize the risk of assassination or life-threatening disease, socio-demographic characteristics should matter considerably.

Table 5 includes four Cox nested models with determinants of the risk of death. Model 1 examines the impact of social class. Since time of entry into the camp was related to the social class of the prisoners (Table 1), Model 2 adds a control variable for year of entry. To assess whether the impact of social class on the likelihood of survival increases or decreases significantly by year of entry, Model 3 includes interaction terms between social class and year of entry. Model 4 adds variables for age group, marital status, and religious self-identification. The last two models also control for prisoners' province of origin. These nested models help to determine the stability of the results and the extent to which some variables absorb the effect of other dimensions. The results in Table 5 are generally consistent with previous work about the demographics of victims in violent conflict because age, social class, and province



Fig. 4 Kaplan-Meier Survival Function by Days in the Camp



of origin do indeed shape the hazard rate. The following paragraphs address these aspects.

Model 1 provides a preliminary indication of the association between social class and risk of death in the camp. In this model and the following ones, the reference group is the highest class—elite and lower middle class—to facilitate interpretation of the results. In accordance with the hypothesis in Section 3, Model 1 indicates significant differences between the hazard rate of elite and lower middle-class workers and that of unskilled nonagricultural and agricultural workers. The latter classes display significantly higher hazard rates than do the highest social class. Furthermore, self-employed workers have a lower risk of death than do members

Table 5 Cox Models Predicting Spanish Prisoners' Death at Mauthausen with Multiple Imputation for Missing Cases, 1940–1945

	Model 1	Model 2	Model 3	Model 4
Self-employed and farmers (Ref. group elite and lower-middle class)	-0.191* (-2.090)	-0.190* (-2.081)	-0.221* (-2.316)	-0.127 (-1.277)
Skilled workers	-0.124 (-1.465)	-0.122 (-1.443)	-0.104 (-1.188)	-0.039 (-0.455)
Unskilled workers	0.295*** (3.449)	0.296*** (3.461)	0.328*** (3.674)	0.380*** (4.273)
Unskilled farm workers	0.609*** (6.879)	0.610*** (6.897)	0.643*** (7.005)	0.697*** (7.517)
Year of entry in the camp		-0.020 (-0.806)	-0.158 (-1.268)	-0.187 (-1.584)
Self-employed and farmers*Year of entry in the camp			-0.248 <sup>+</sup> (-1.659)	-0.157 (-1.075)
Skilled workers*Year of entry in the camp			0.064 (0.485)	0.101 (0.812)
Unskilled workers*Year of entry in the camp			0.263 <sup>+</sup> (1.883)	0.292* (2.189)
Unskilled farm workers*Year of entry in the camp			0.370** (2.700)	0.366** (2.779)
Age 25–34 (Ref. group: 14–24)				0.469*** (9.827)
Age 35–44				1.077*** (18.064)
Age 45–74				1.483*** (16.479)
Single (Ref. group: married or widowed)				0.104* (2.100)
Catholic (Ref. group: Protestant or no religion)				0.053 (0.832)
Province FE	No	No	Yes	Yes
N	6,455	6,455	6,455	6,455

\* $p < 0.05$ .

\*\* $p < 0.01$ .

\*\*\* $p < 0.001$ .

NOTE t-stats in parentheses.

of the elite and the lower middle class. This evidence suggests that, in accord with the expectation of this study, the social class of Spanish deportees shaped their life chances.

Since time of entry to the camp varied by social class, the class of origin could be capturing the effect of year of entry into the camp. To check, Model 2 adds the control variable year of entry, which turns non-significant. More importantly, controlling for year of entry, the coefficients of social class reported in Model 1 change only modestly; unskilled manufacturing and agricultural workers still display a significantly larger risk of death in the camp than do the elite and lower middle class.

If class structure differed substantially by province, and the middle and upper classes concentrated in certain regions, the class effects found in Model 2 could potentially disappear after controlling for the province of origin. Moreover, results from a global proportional-hazard assumption test after Model 2 (available upon request) indicate that the differences in the likelihood of death do not remain parallel during the time spent in the camp. Hence, following Box-Steffensmeier and Jones, we include covariate interactions with time: Model 3 adds interaction terms with the year of entry into the camp. Since the variable “year of entry” has been centered to ease interpretation, the social-class dummies indicate the effect of social class at the average year of entry. At the average year of entry, self-employed prisoners continue to have a lower hazard than elite and lower middle-class prisoners, and unskilled (agricultural and non-agricultural) workers display a significantly higher hazard than elite and lower middle-class prisoners.<sup>29</sup>

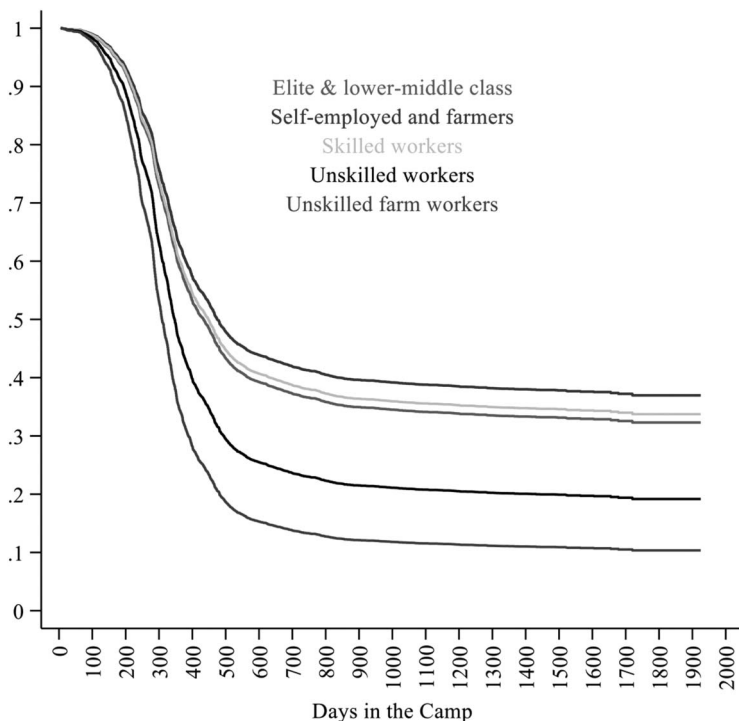
Because the interaction terms between unskilled non-agricultural and agricultural workers and year of entry are also positive and significant, the class differential in survival rates was larger for prisoners deported to the camp in 1941 and thereafter than for prisoners deported in 1940. Model 3 in Table 5 does not report the fixed-effects coefficients for fifty-one provinces, partly to keep the table compact and partly because most province effects are not significant. Only prisoners from Álava, Asturias, Córdoba, León, and Murcia had a significantly different, uniformly higher, risk of dying than prisoners from Barcelona—the reference group, from the province with the largest contingent.

29 Janet Box-Steffensmeier and Bradford Jones, *Event History Modeling* (New York, 2004), 136–137.

Model 4 adds variables corresponding to three other socio-demographic factors—age group, being single, and Catholic. According to this model, age has a strong and almost linear effect on the risk of death. The lowest risk was among the youngest age group (prisoners fourteen to twenty-four), followed by prisoners aged twenty-five to thirty-four, those thirty-five to forty-four, and those forty-five to seventy-four. The variable “religious self-identification” proves unrelated to the risk of death. Independent of their age, social class, and province, Catholic prisoners were not significantly more likely to die in the camp than non-Catholic prisoners. The variable “single” is positive and significant in Model 4 but not sufficiently robust, because it is non-significant in models without multiple imputation.

Models 1–4 in Table 5 indicate that the social class of prisoners shapes their mortality rate. But how substantial is the effect? Based on the results in Model 4, Figure 5, which depicts the survival

Fig. 5 Kaplan-Meier Survival Function by Days in the Camp



rate by social class, depending on the length of time spent in the camp, displays noticeable group differences. The largest class gap occurs between three groups—unskilled farm workers, unskilled non-agricultural workers, and all the other classes (elite, lower middle class, and self-employed or farmers). The probability of survival on day 997 was .118 for unskilled farm workers, .211 for unskilled non-agricultural workers, and .391 for self-employed farmers. Hence, substantial class differences in the likelihood of survival emerge from the data: Unskilled farm workers had the largest risk of death, followed by other unskilled workers and skilled and self-employed workers.

The multivariate results discussed so far were obtained with imputed missing values. Since this analytical strategy could affect the findings, Table 6 replicates the Models in Table 5 but without imputed missing values. Despite a substantial decline in the number of cases, especially after including the variables for age group, marital status, and religious self-identification, the same social-class variables remain significant and in the same direction as in the models of Table 5. Without imputing missing information, self-employed farmers had lower hazards of death than did elite and lower middle-class prisoners, whereas unskilled workers had a higher hazard of death than did elite and lower middle-class prisoners. Moreover, in a model without imputed missing values, the class gaps in survival likelihood were, in fact, larger for prisoners deported in 1941 or thereafter than for those deported in 1940.

The chilling efficiency with which the massive Nazi, and Soviet, concentration camps were able to administer suffering and death had a devastating effect on human political history. Despite the more than seventy-five years since the closure of these camps, we are now only beginning to understand the complex web of beliefs and relations that undergirded their structure and operation. In its assessment of the individual conditions that shaped Spanish prisoners' chances of survival, this article contributes three main findings.

First, mortality displays a substantial age gradient. The younger the prisoners were, the higher were their chances of survival, though the evidence does not suggest a strong discontinuity in this respect. By contrast, the decline in survival chances varied almost linearly with age. Although this pattern was not fully inconsistent with the intense ageism of Nazi guards and camp administrators, as

Table 6 Cox Models Predicting Death at Mauthausen among Spanish Deportees without Multiple Imputation for Missing Cases, 1940–1945

	MODEL 1	MODEL 2	MODEL 3	MODEL 4
Self-employed and farmers (Ref. group elite and lower middle class)	-0.187* (-2.091)	-0.185* (-2.063)	-0.222* (-2.350)	0.243* (2.002)
Skilled workers	-0.127 (-1.515)	-0.123 (-1.468)	-0.103 (-1.174)	0.099 (0.891)
Unskilled workers	0.290*** (3.330)	0.291*** (3.346)	0.330*** (3.636)	0.569*** (4.936)
Unskilled farm workers	0.601*** (6.996)	0.604*** (7.021)	0.643*** (7.159)	0.637*** (5.514)
Year of entry in the camp		-0.041 (-1.474)	-0.190 (-1.473)	-0.112 (-0.781)
Self-employed and farmers*Year of entry in the camp			-0.310* (-2.032)	0.201 (1.145)
Skilled workers*year of entry in the camp			0.065 (0.475)	0.127 (0.840)
Unskilled workers*Year of entry in the camp			0.313* (2.212)	0.346* (2.213)
Unskilled farm workers*Year of entry in the camp			0.415** (2.955)	0.441** (2.771)
Age 25–34 (Ref. group: 14–24)				0.322*** (5.770)
Age 35–44				0.772*** (10.810)
Age 45–74				0.858*** (7.883)
Single (Ref. group: married or widowed)				0.070 (1.459)
Catholic (Ref. group: Protestant or no religion)				0.015 (0.240)
Province FE	No	No	Yes	Yes
N	5,611	5,611	5,611	3,281

\* $p < 0.05$ .

\*\* $p < 0.01$ .

\*\*\* $p < 0.001$ .

NOTE t-stats in parentheses.

disclosed in the qualitative literature, the Nazi ideology would seem to have generated a sharper gap in survival between the younger and older prisoners. Nonetheless, Mauthausen's brutal working and sanitary conditions, which could well have taken a linearly increasing personal toll with age, offer more likely causes of the steep but quasi-linear age gradient.

Second, prisoners' social class structured mortality patterns. Cox models reveal that prisoners' social class significantly and substantially influenced their likelihood of dying in the camp. Supporting our main guiding idea that the camps were not only status-based organizations but also organizations in which class affected survival, the analysis indicates that unskilled farmers and non-agricultural workers were most at risk, followed in order by skilled workers and all other workers. Several key aspects of the camp's social structure help to explain this pattern. Skilled manual workers were valuable resources in the labor-scarce war economy; their efforts were probably rewarded with better rations and living conditions. Highly skilled and service-sector workers had preferential access to administrative positions with advantageous work conditions. Service-sector workers with formal education, who were more likely to have some command of the German language or a greater ability to learn it, also had an advantage. This combination of sharp occupational and material inequalities in a context of cruelly dehumanized relationships coalesced as a rigid class division between prominent and pariah workers that must have boosted the feeling of dispossession and hopelessness among subordinated groups.

Third, neither the prisoners' marital status nor their religious self-identification had a significant and robust effect on the likelihood of survival. Although demographic research has consistently confirmed the Farr-Bertillon law that married people were more prone to lower mortality rates than single individuals, our study does not support this pattern for Spaniards in Mauthausen. Marital status may not have mattered because none of the prisoners had the emotional and material advantages of actually living with their spouses. Similarly, a mere religious identification may not have

30 Peter Richmond and Bertrand M. Roehner, "Effect of Marital Status on Death Rates: Part 1: High Accuracy Explorations of the Farr-Bertillon Effect," *Physica A: Statistical Mechanics and Its Applications*, CDL (2016), 748-767.

conferred the same solace and emotional support that a fully committed religious belief with access to its associated practices would have conveyed.<sup>30</sup>

Our study has noticeable limitations. The analysis cannot explicate the meaning of death for these prisoners. Although people are hard-wired to maximize their chances of survival, extreme conditions may well cancel this predisposition. As Kranebitter notes, “What cannot be ignored are the innumerable indications that death was possibly seen as a relief, a way out and an escape from the reality of the concentration camps, as an end to horror, which was preferred to a horror without end.” If death can be a liberation from a life fully controlled by others, we can only wonder “how many of these dead did not survive even though they tried to? How many did not survive because they did not want to?” Accordingly, we should avoid a moralistic narrative of survival as an unconditional success story and allow for a less prejudicial meaning of life and death in contexts of unspeakable suffering.<sup>31</sup>

Furthermore, data limitations in the original archival sources did not allow us to consider other socio-demographic characteristics like in-camp personal networks, military background, former political activism, or health status upon imprisonment, among others. Pending the discovery of further data about those aspects, this study advances our understanding of life under extreme duress in a Nazi camp by discovering a social-class gradient in the risk of death among Spanish prisoners at Mauthausen.

31 Kranebitter, *Zahlen als Zeugen*, 176 (author’s translation), 177; Tzvetan Todorov, *Facing the Extreme: Moral Life in the Concentration Camps* (New York, 1996), 199–212; Subotić, “Ethics,” 5.