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THE VICTIMS OF THE "GREAT WAR" IN TRANSYLVANIA: RECOVERING THE SOURCES AND DESIGNING A DATABASE OF INVALIDS, ORPHANS, AND WAR WIDOWS

Abstract: The present work introduces the scholarly community to a database containing information about the invalids, orphans, and widows of the First World War in Transylvania – the IOW database, which uses data extracted from the files relating to pensions awarded to these social categories as its main sources. These consist primarily of civil status documents, reports on the personal characteristics of the enrolled soldiers, data relating to war participation and testimonies proving disappearance or death in addition to medical records, as well as information regarding the situations of the beneficiaries' families and the amounts of money they received, and evidence attesting changes in the status of pension beneficiaries. Next, the details were entered into a relational database that will enable multiple scientific investigations in the fields of humanities, social sciences, and legal studies, as well as medicine and history of medicine, and offer the possibility of having a social and cultural impact among the general public and local communities. The preliminary results, drawn from the table relating to widows, illustrate the negative consequences of war on the lives of men, women, and children in Transylvania. Finally, the paper outlines further development of the database and future lines of research.

Keywords: First World War, Transylvania, IOW database, HPDT

INTRODUCTION

The First World War engendered important shifts within the social, economic and cultural fields, as well as in the area of international relations. Moreover, the conflict had a series of negative consequences expressed in human losses and sacrifices, in addition to upheaval, suffering and material destruction. The "Great War" resulted in between 8 ½ and 10 million victims among the combatants (Davies, 1997: 1328; Janz, 2009: 273; Winter, 1995: 6; Zolotarev, 2014: 320) and approximately 20 million injured and invalided soldiers, as well as millions of widows and orphans (Zolotarev, 2014: 320).

Although more than a century has passed since the events of the First World War, many aspects relating to the conflict are still unknown, especially in regard to Eastern Europe. The historian Jay Winter (2006) emphasized the fact that although 10 million men in uniforms fought on the Eastern Front of the First World War, their stories remain, in most cases, unpublicized. Other historians also pointed out this aspect, highlighting that not knowing many details about the war was a common characteristic in almost all the states that were part of the former Austro-Hungarian Monarchy (Kranjc, 2009).

Many subjects related to the First World War were deliberately obscured or avoided because of reticence and a reluctance to unearth forgotten traumatic events. A less common topic addressed by researchers and historians was the experience of disabled people, as well as orphans and widows affected by the First World War: the publications and articles dedicated to these social categories created by the conflict are less numerous even in Western historiography. For example, Seth Koven (1994) addressed the issue of the British soldiers injured during the First World War, and Deborah Cohen (2001) that of the British and German soldiers who became disabled during the conflict. The topic of First World War orphans in France has been discussed by Oliver Faron (1999), while Angela Smith (2010) used several case studies to offer a detailed picture of the situation of British war widows, emphasizing the ways whereby the state assumed the role of the missing husband by providing material and moral support. For Eastern Europe, Anita Magowska (2012) has investigated the extremely difficult situation of the Polish invalids, victims of the same war, and Natan Meir (2009) approached the story of Jewish orphans from that area. For this region we must also mention the works of Alexandre

Sumpf (2016, 2010), dedicated to Russian veterans and war amputees. One of these also discussed the establishment of a legal framework for the care and support of people who became disabled during the First World War in Russia.

Several research projects were launched in Western Europe in the context of the 100th anniversary of the beginning of the First World War. One such initiative with wide international participation, financially supported by a grant of around 1 million euros, offered by the German Research Foundation (DFG), began in October 2014. The main purpose of "1914–1918-online. International Encyclopedia of the First World War" (2022) was to make numerous resources regarding the First World War available to the public. Another example, "The Great War from Below. Multiple Mobility and Cultural Dynamics in Belgium" (2022) also had the objective of analysing the long-term impact of the war in Belgium by focusing, among other aspects, on the social group of veterans and invalids. Likewise, "Healthcare services in the First World War: Portuguese soldiers during and after the Great War (1914–1960)" (2022), investigated the situation of the men who served on the fronts in Europe and Africa, examining the efforts made by institutions as well as the state in Portugal to assist and integrate wounded, traumatized, and sick soldiers. In the same way, the situation of Italian and French soldiers who fought in the trenches of the First World War has been scrutinized by using information extracted from large databases with advanced statistical analysis techniques (Fornasin, Breschi and Man fredini, 2019). More recently, the situation of Hungarian children left orphaned by the Great War and the practical support offered to them by the state have been the subject of investigations carried out by Friederike Kind-Kovács (2021).

Current research into the consequences of the First World War in Transylvania in general, and for invalids, orphans and war widows in particular, is still significantly lagging behind, despite an increased interest in the issue after 1989. The number of works exclusively addressing the experience of those who suffered as a result of the war is even smaller. For instance, Daniela Mârza (2007) undertook an investigation of the institutions for war orphans in Transylvania, while most other works relating to the social categories of invalids, orphans, and widows are limited to case studies (Dologa, 2015; Holom and Crăciun, 2015; Morariu, 2019; Holom, 2020: 19–20).

This brief overview of some of the historiographic achievements in relation to invalids, orphans and war widows is intended to illustrate as convincingly as possible that there is space for further exploration in this field. Overall, the main difficulty stems from the fact that many of the documents relating to the First World War have been destroyed, while others are still "hidden" in archives and need to be re-discovered and examined, a situation that is especially encountered in the regions that belonged to the former Austro-Hungarian Monarchy, as mentioned above. The collection of large amounts of information and documents about the First World War, as well as their structured inclusion in databases (Zolotarev, 2014), is essential for a high standard of scientific investigation. Whereas in Western Europe, the necessity of such historical databases is now widely accepted, with various researchers arguing that the future belongs to digital infrastructures (Hall, McCaa, and Thorvaldsen, 2000), such instruments in East European research remain scarce. By constructing a database relating to the social categories created by the First World War in Transylvania, many remaining questions about the conflict in this part of Europe could be answered. Through a multidisciplinary approach, this database could also be used to generate valuable research regarding the First World War.

SOURCES ON THE VICTIMS OF THE FIRST WORLD WAR

At the end of the First World War, Romania faced manifold negative social consequences, including approximately 100,000 invalids, of whom 68,710 were from the lower ranks of the military, 300,000 widows, including 68,710 widows of officers and 225,328 widows of lower-rank combatants, and 357,260 orphans (*Monitorul Oficial*, 1922/20: 897). A significant number originated from Transylvania, where First World War casualties included 25,406 invalids, 79,226 orphans, and 38,630 widows (*Transilvania*, 1923/54: 51).

In order to support the social groups created by the war, a wide range of measures were implemented. By far the most important legal initiatives enacted by the Romanian authorities in Bucharest were the *Law for the establishment of the National Office for war invalids, orphans and widows* (*I.O.W*), adopted on 2 September 1920, the *Law on the ratification of decree No. 70/918 and on the introduction of modifications and additions to the law on the revision of lower-grade pensions decreed under No. 3244/916*, passed

on 2 September 1920, the *Statutes for the application of the Law on the establishment of the National Office for war invalids, orphans, and widows*, created on 31 December 1920, the *Regulation on the law for revised lower-grade pensions of 1916 and additional modifications*, issued on 4 January 1921, and the *Statutes of law for the pensions of those who took part in the war for national integration*, dated 5 February 1921 (*Monitorul Oficial*, 1920/119: 4143–4151, 4152–4156; 1920/217: 9019–9059; 1921/220: 9189–9215; 1921/242: 10435–10443).

The above-mentioned legislation clearly indicated which individuals needed support, including "all the persons who had become invalids, orphans and widows as a result of the war or of war-related causes" (*Monitorul Oficial*, 1920/119: 4143). The main purpose of these regulations was to establish the legal rights of invalids, orphans, and war widows, and to issue the papers and certificates in support of their entitlement to benefits and assistance (*Monitorul Oficial*, 1920/11: 4143). The legislation outlined in detail the procedures to be followed by individuals claiming pensions, including the forms to be included in the application. The main types of documents included civil status papers, reports on the character of the recruit, testimonies proving disappearance/death and medical records, as well as data regarding the situation of the beneficiaries' family and the amounts of money they received, in addition to information on the soldier's role in the war and evidence attesting changes in the circumstances of pension beneficiaries (several samples of these types of documents are presented on the following pages).

Figure 1. Civil status papers – extract from a copy of a marriage certificate
Source: NABN, IOW, inv. 618.

Figure 2. Civil status papers – extract from a copy of a birth certificate
Source: NABN, IOW, inv. 618.

Figure 3. Civil status papers – extract from a copy of a death certificate
Source: NABN, IOW, inv. 618.

Figure 4. Reports on the character of the recruit
Source: NABN, IOW, inv. 618.

Figure 5. Information about war roles and participation
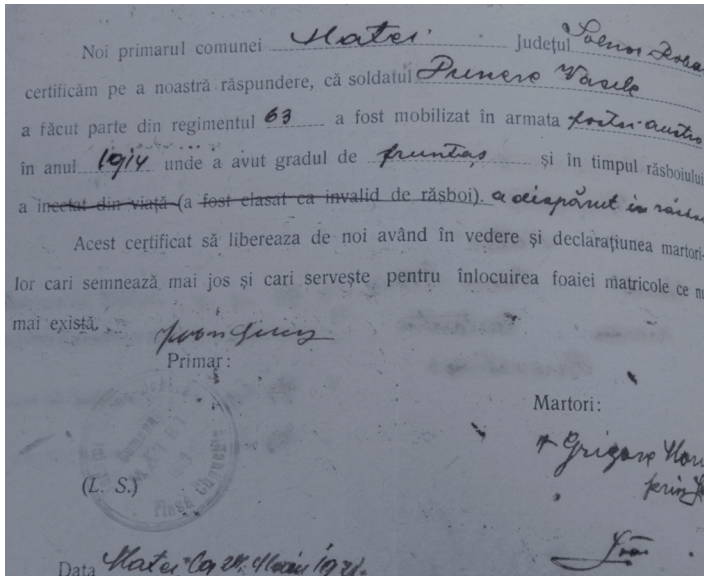Source: NABN, IOW, inv. 618.

Figure 6. Testimonies about the soldier's disappearance/death
Source: NABN, IOW, inv. 618.

Figure 7. Medical records attesting invalidity
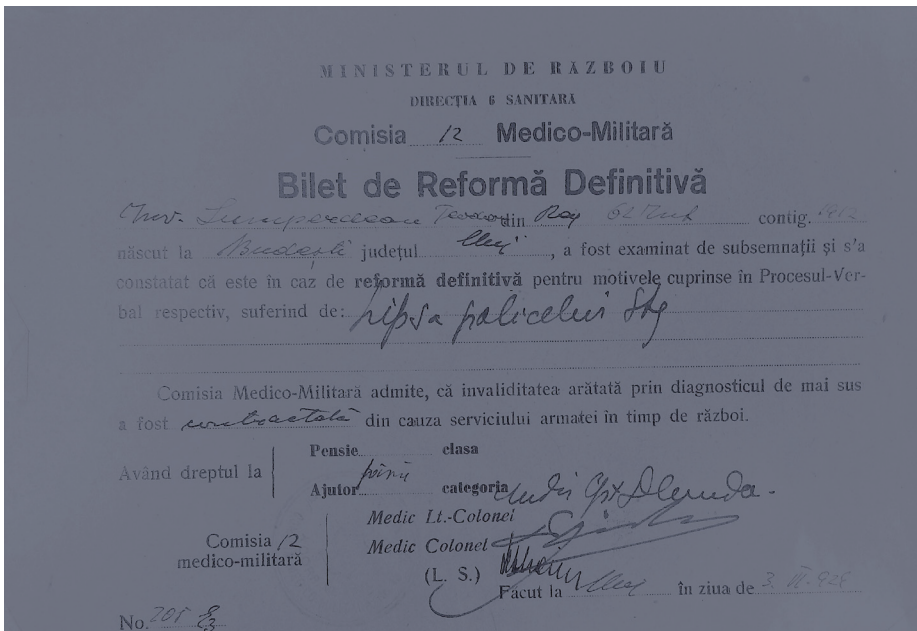Source: NABN, IOW, inv. 618.

Figure 8. Data on the situation of the beneficiaries' family
Source: NABN, IOW, inv. 618.

Figure 9. Documents attesting changes in the circumstances of pension beneficiaries
Source: NABN, IOW, inv. 618.

FROM SCATTERED INFORMATION TO A DATABASE

While the necessity of utilizing computers in historical studies had been stressed since the beginning of the 1960s, and the use of databases for historical populations from the 1970s', it is only possible to speak about a digital turn in historical research in relation to the 1990s and 2000s, which was stimulated by the faster spread of technology and an expansion in computing power. Historians gained multiple advantages in the form of access to a larger amount of data, safe storage, and easier accessibility, allowing for the information to be accessible for analysis and the results to be broadly disseminated in the scientific community (Lumezeanu, 2021: 20–22). Meanwhile, the exponential expansion of databases relating to historical populations offered the possibility of path-breaking investigations in historical demography, as well as social and medical history, with the developers establishing principles and recommendations to be followed in the process of the construction and management of such types of digital instruments. In essence, a database should be constructed to serve multiple scientific purposes and scholars, allow subsequent analyses and permit future expansions. In addition, all the information in a historical source should be entered into the database, essentially creating a digital clone of the evidence (Mandemakers and Dillon, 2004; Lumezeanu, 2021: 23). On the other hand, a database should also consider the principle of normalization and the avoidance of data redundancy by creating supplementary tables. Finally, the database model should be flexible, allowing for the incorporation of new features without affecting the information already stored, enabling the expansion of the instrument (Lumezeanu, 2021: 39–40).

In regard to the First World War, the gaps in current research can be filled in by using the information kept in the archives, as was the case for the documents relating to the victims of the conflict in Transylvania. The main source for the construction of the database was the *Invalizi, orfani și văduve de război* (*I.O.V.R*)/*Invalids, orphans, and war widows* (*I.O.W*) *fonds--Bistrița, 1918–1961* (NABN, IOW, inv. 618). Held in the repository of the National Archives, Bistrița-Năsăud county branch, under shelf marks 618 and 805, the fonds total 8,772 archival documents and consist of the pension files for invalids, orphans, and widows of the two world wars. A careful examination shows that most of the materials refer to those who suffered from the conflict of the First World War.

For the purposes of our endeavour, a consistent series of files were photographed as a basis for the design of the database. The main intention of the database was to incorporate the information scattered across the files in a comprehensible and flexible way.

The database was built in MySql, an open-source relational database management system, and stored on a Linux server. Access to the database is provided through a user interface built in the Ruby on Rails framework. The user interface connects to the server with an Internet Protocol (IP) address and every change is seen by all the users. The system allows for multiple users at the same time.

The database followed a source-oriented approach, with the design replicating the original source, as well as all the information contained within (Lumezeanu, 2021: 23–24). This method of database construction has been used by many scholars concerned with studying historical populations, and similar kinds of digital infrastructures following this design have been created in the Netherlands, with the Historical Sample of the Netherlands (HSN), in addition to the Karelian Database (KATIHA) in Finland and the Norwegian Historical Population Register (NHD) in Norway, as well as demographic databases (POPLINK and POPUM) in Sweden. In Romania, the Historical Population Database of Transylvania (HPDT) used the same source-oriented method as a general principle of construction (Lumezeanu, 2021: 26–40).

The design of the IOW database is relational and includes main, secondary and auxiliary tables that are connected through relationships. As such, the database is presently structured into three main tables (invalids, widows, and orphans), two secondary ones (children and events), and eight auxiliary ones (counties, places, relations, spouses, family members and their capacity, ranks, and units). Three of the database tables, relating to denomination, marital status, and occupation, are used jointly with the Historical Population Database of Transylvania (HPDT) (Bolovan et al., 2019). A further three joined tables (used for many to many relationship) establish links between the table on occupations and the main ones of the IOW database, thus enabling multiple selections. Currently, the IOW model contains 19 tables and is linked to the HPDT (Figure 10).

It should be noted that the three main tables refer to the three major social categories created by the war – invalids, orphans and widows – and contain all the relevant information extracted from the pension files created at the end of the conflict, with each one described in detail in the following pages.

Figure 10. The IOW database model
Source: IOW database.

Main Tables

The table concerning invalids has a total of 98 columns, containing general information about the file referring to the invalid, his wife (if married), details relating to the marriage (if such an occasion had taken place) and the number of children (if any), and data proving the individual's participation in the war, in addition to a description of the soldier's physical features as well as his invalidity, pension and other events (Figure 11).

Details of invalid *Andrei Bartha*

File current number: 338	Wife first name: Ana	Army unit: Imperial Regiment 32	Diagnostic: Calus diformat al primului și al doilea metatarsian al piciorului stâng
File old number: 2520	Wife last name: Mefara	Contingent number: 1918	
Place: Coldău	Wife nickname:	Children no: 1	Disability type:
County: Someş	Wife maiden name:	Enrollment day: 15	Disability degree:
Year:	Wife birth day: 26	Enrollment month: 10	Pension granted: Yes
First name: Andrei	Wife birth month: 8	Enrollment year: 1915	Rejection reason:
Last name: Bartha	Wife birth year: 1897	Demobilization day: 1	Amount of pension: 40
Nickname:	Wife Occupation:	Demobilization month: 11	Currency: Lei
Birth day: 19	Wife residence: Coldău	Demobilization year: 1918	Pension start day: 1
Birth month: 10	Wedding day: 16	Army rank: Soldier	Pension start month: 4
Birth year: 1897	Wedding month: 9	Height:	Pension start year: 1921
Invalid Occupation:	Wedding year: 1917	Hair color:	Pension end day:
• Econom	Wedding place: Coldău	Face:	Pension end month:
Marital status: married	Wedding county: Solnoc-Dăbâca	Moustaches:	Pension end year:
Residence: Coldău	Groom denomination: Calvinist (Reformed)	Forehead:	Source pages: 1-22
		Eyebrows:	
	Bride denomination: Calvinist (Reformed)	Eye color:	
		Nose:	
		Mouth:	
		Chin:	
		Special Peculiarities:	

Events

Children

First name	Last name	Birth date	Death date
Ioan	Bartha	7/3/1918	

Edit | Back

Figure 11. Invalid details page
Source: IOW database.

The section on information about the file includes the new and old reference numbers allocated during archiving, in addition to the locality, county, and year of production, as well as the number of pages it contains.

The information on the invalid section includes the name, surname, and nickname of the individual concerned, as well as the day, month, and year of birth, occupation, marital status, and residence. The data have been entered as indicated in the source, except for the place, county, the invalid's occupation, marital status, and residence fields, where the details have been selected from a drop-down list.

The section on information about the spouse lists the name, surname, nickname, and maiden name, as well as the day, month and year of birth, occupation, and residence of the spouse. The details have been filled in as they appear in the source, except for the wife's occupation and wife's residence fields, where the data have been selected from a drop-down list.

The section containing information about the individual's marriage (if such an event took place) includes the day, month, and year of the occasion. The entry for the date has been split into three fields, because this type of information was not fully recorded in the pension files. The location and county where the marriage took place, as well as the bride's and groom's religions, have also been listed. The details have been entered as indicated in the source, except for the fields regarding the wedding location and county, where it took place, as well as the bride's and groom's denominations, where the data have been selected from a drop-down list.

The section containing information about the number of children lists the exact number of children, or the number zero if the couple did not have any. In cases where several offspring existed, a secondary table on the children has been created, which includes all the data about them, thus avoiding increasing the number of columns.

The section on information that proves a soldier's participation in the war includes the unit in which he served and the contingent to which he belonged, in addition to the day, month, and year of enrolment and demobilization, as well as his rank in the army. These details have been inserted as indicated in the source, except for the army unit and rank fields, where the information has been selected from a drop-down list.

The section containing information about the soldier's physical features contains data about height, hair colour, face, moustache, forehead, eyebrows, eye colour, nose, mouth, chin, and other details. The details have been entered as indicated in the source.

The section involving information about invalidity contains data on the medical condition as diagnosed, as well as on the type and degree of disability. The details have been entered as listed in the source.

The section regarding information about the pension also mentions cases in which the pension was not granted, as well as the reasons for the rejection of the application. The sum that was received and the currency in which it was awarded have also been recorded. The day, month, and year of the commencement of the pension and the interruption of the award have been specified. The data have been entered as they appear in the source, with the only exception of the currency field, where the details have been selected from a drop-down list.

The table on widows has a total of 97 columns, and contains general information about the file, data on the widow and her husband and details about the marriage, as well as information that proves the husband's participation in the war, the husband's physical features, information about pensions, and other events (Figure 12).

The section relating to information about the file includes the new and old reference numbers received during the archiving process, the locality, the county, and the year the file was produced, as well as the number of pages.

The section on information about the widow includes the name, surname, nickname, and maiden name of the widow, as well as the day, month, and year of birth, and her occupation and residence. The details have been entered as they appear in the source, except for the place, county, and widow's occupation fields, where the data have been selected from a drop-down list.

The information about the husband/soldier section lists his name, surname, and nickname, as well as his day, month, and year of birth. The details have been entered as they appear in the source, except for the field soldier's occupation, where the data have been selected from a drop--down list.

The section on information about the marriage lists the day, month, and year of the event, and the location and county where the marriage took place, as well as information on the bride's and groom's denominations. The details have been completed as indicated in the source, except for the fields for the wedding venue and county as well as the bride's and groom's religions, where the data have been selected from a drop--down list.

The information about the number of children section lists either the precise number of children or the figure zero if the couple did not have any. The section on information that proves the recruit's participation in the war effort lists the unit in which the soldier/husband served and the

Details of widow *Ecaterina Ungar*

File current number: 2586	Soldier first name: Martin	Army Unit: Imperial Regiment 32	Children no: 1
File old number: 2574	Soldier last name: Ungar	Contingent no.: 1914	Pension granted: Yes
Place: Lechința	Soldier nickname:	Soldier status: deceased	Rejection reason:
County: Bistrița-Năsăud	Soldier civil status:	Height:	Amount of pension: 75
Year: 1922	Soldier birth day: 27	Hair color:	Currency: Lei
First name: Ecaterina	Soldier birth month: 10	Face:	Pension start day: 1
Last name: Ungar	Soldier birth year: 1890	Forehead:	Pension start month: 7
Nickname:	Soldier age at marriage:	Eyebrows:	Pension start year: 1923
Maiden name: Gillig	Soldier occupation:	Eye color:	Pension end day:
Civil status:	• Econom	Nose:	Pension end month:
Birth day: 10	Weddding day: 2	Mouth:	Pension end year:
Birth month: 10	Wedding month: 1	Chin:	Source pages: 1-16
Birth year: 1893	Wedding year: 1911	Special Peculiarities:	General Observations:
Widow age at marriage:	Wedding place: Lechința	Enrolement day: 2	
Widow Occupation:	Wedding county: Bistrița-Năsăud	Enrolement month: 8	
	Groom denomination: Lutheran	Enrolement year: 1914	
	Bride denomination: Lutheran	Death/disappearance day: 4	
		Death/disappearance month: 11	
		Death/disappearance year: 1916	
		Death place:	
		Death cause:	
		Rank: Soldier	

Events

Event no.	Event date	Event type	Remarks
1	1/4/1930	Pensia se reduce la jumătate	Majoratul ultimului copil minor

Children

First name	Last name	Birth date	Death date
Martin	Ungar	5/1/1912	

Figure 12. Widow details page
Source: IOW database.

contingent to which he belonged, in addition to the day, month, and year of enrolment and demobilization, as well as his rank. The details have been completed as indicated in the source, except for the army unit and rank fields, where the data have been selected from a drop-down list.

The section for information about the soldier's/husband's physical features contains data about his height, hair colour, facial features, moustache, forehead, eyebrows, eye colour, nose, mouth, chin, and special details. The details have been completed as indicated in the source.

The section on information about the pension also mentions the cases in which the pension was not granted, as well as the reasons for the rejection of the application. The sum that was received and the currency

Details of orphan *Ilie Marcu*

File current number: 3444	**Father first name:** Mihai	**Army unit:** Imperial Regiment 32	**Guardian first name:** Ana
File old number: 1209/26939	**Fatehr last name:** Marcu	**Contingent no.:** 1908	**Guardian last name:** Năsăudean
Place: Ilva Mică	**Father nickname:**	**Soldier status:** missing	**Guardian nickname:**
County: Bistrița-Năsăud	**Father Occupation:**	**Enrolment day:** 26	**Guardian maiden name:**
Year: 1922	• Econom	**Enrolment month:** 7	**Relation with orphan:** Mother
First name: Ilie	**Father birth day:** 6	**Enrolment year:** 1914	**Pension granted:** Yes
Last name: Marcu	**Father birth month:** 4	**Death/disappearance day:** 28	**Rejection reason:**
Nickname:	**Father birth year:** 1885	**Death/disappearance month:** 10	**Amount of pension:** 75
Birth day: 2	**Father birth place:** Ilva Mică	**Death/disappearance year:** 1914	**Currency:** Lei
Birth month: 6	**Mother first name:** Ana	**Death place:**	**Pension start day:** 1
Birth year: 1912	**Mother last name:** Năsăudean	**Death cause:**	**Pension start month:** 10
	Mother nickname:		**Pension start year:** 1923
	Mother maiden name:		**Pension end day:** 8
	Mother Occupation:		**Pension end month:** 1
	Mother birth day: 28		**Pension end year:** 1930
	Mother birth month: 11		**Source pages:** 1-34
	Mother birth year: 1891		
	Mother birth place: Ilva Mică		
	Wedding place: Feldru		
	Groom denomination: Greek Catholic		
	Bride denomination: Greek Catholic		
	Wedding day: 21		
	Wedding month: 11		
	Wedding year: 1908		

Events

Event no.	Event date	Event type	Remarks
1	8/1/1930	Decesul copilului	Încetarea pensiei

Figure 13. Orphan details page
Source: IOW database.

in which it was awarded have also been recorded. The day, month, and year of commencement of the pension and the interruption of the award have been specified. The details have been completed as they appear in the source, with the only exception of the currency field, where the information has been selected from a drop-down list.

The table regarding orphans has a total of 87 columns and contains general information about the file, as well as about the orphan and his/her parents, in addition to details about the parents' marriage, the father's participation in the war, the guardian and his/her relationship to the orphan, the pension, and other events (Figure 13).

The information about the file section refers to the new and old reference numbers the document received during archiving, the locality, the county, and the year when the file was drawn up, as well as the number of pages.

The section on information about the orphan lists the orphan's name, surname, and nickname, as well as the day, month, and year of birth. The details have been completed as they appear in the source, except for the place and county fields, where the data have been selected from a drop-down list.

The section relating to information about the orphan's parents lists the names, surnames, and nicknames of the father and mother, as well as the day, month, year, and place of birth, in addition to occupation. In this section the details have been completed as indicated in the source, except for the mother's and father's occupation, birthplace and county fields, where the data have been selected from a drop-down list.

The section on information about the parents' marriage includes the day, month, and year of the event, in addition to the location and county where the wedding ceremony took place, as well as the bride's and groom's religions. The details have been completed as indicated in the source, aside from the fields for wedding place and the bride's and groom's denominations, where the data have been selected from a drop--down list.

The section relating to information that proves the father's participation in the war refers to the unit in which he served and the contingent to which he belonged, in addition to the day, month, and year of enrolment and demobilization, as well as his rank in the army. The details have been completed as indicated in the source, except for the army unit and soldier's status fields, where the data have been selected from a drop-down list.

The section on information about the guardian lists his or her name and the relationship to the orphan. The details have been completed as indicated in the source, except for the relation field, where the data have been selected from a drop-down list.

The section containing information about the pension also mentions cases in which the pension was not granted, as well as the reasons for the rejection of the application. The sum that was received and the currency in which it was awarded are also recorded. The start day, month, and year of the pension and the suspension of the award are specified. The details have been completed as they appear in the source, with the only exception being the currency field, where the information has been selected from a drop-down list.

Secondary and Auxiliary Tables

In order to avoid omitting information from the pension files, as well as unnecessary repetitions and the addition of new (unnecessary) fields in the main tables, we decided to create several tables with secondary information connected to the main ones through foreign keys. These tables are useful for maintaining the information in the database in a normalized form. The table on invalids has 11 connections so far, while the ones relating to widows and orphans have eight each.

The table relating to children includes all the offspring, providing detailed data about them, including the day, month and year of birth and death, and some basic details about the parent, whether this was an invalid or widow. Within this section the information has been completed as indicated in the source, except for the field regarding the category, where the invalid or widow situation has been selected from a drop-down list (Figure 14).

The files sometimes mentioned events that occurred after the award of the pension. For this type of information, the events table was created, which was connected to all three main tables for the invalids, orphans and widows through foreign keys. The reason for the creation of this secondary table was the lack of a standard number of events. Sometimes these may be missing; occasionally the source may indicate one or more (e.g., a rise in the pension amount, the death of the orphan, etc.). The table offers data on the day, month and year as well as the type of event (e.g., an increase in pension), and can be opened and completed for each new event registered in a source (Figure 15).

The auxiliary tables have been connected to one or all three of the main tables. They were created to avoid data redundancy and to improve the performance of the database. They usually contain one or two columns. As such, the table relating to counties encloses the name of those where the files had been issued, along with those of the individuals' provenances. In the same way, the table on places contains the name of the settlements where the file was completed and the place of individual's residence, as well as name of the places where some important life events occurred, such as weddings. The table on ranks notes the position held by the person who served in the army, such as whether he was a soldier – a corporal, sergeant, or petty officer, etc. The one on units indicates the name of the army unit of service, such as Infantry Regiment 63, Infantry Regiment 32, etc. These tables can be updated every time a new county, place, rank or unit appears in the documents.

Figure 14. Child details page
Source: IOW database.

Figure 15. Event details page
Source: IOW database.

The table relating to spouses is linked only to the main table on widows at the moment, and specifies the name, surname, and nickname as well as the day, month, year and place of birth, age, and denomination of the husband in the event of the widow's remarriage. The information has been entered as registered in the source, with the exception of the birthplace and denomination, where the details have been selected from a drop-down list. The table can be opened and updated in cases where a new marriage is identified.

To be able to capture the complex nature of family ties in future analyses, as well as to avoid excessively complicating the structure of the database, we have decided to link the table on family members to all three of the main ones. This table mentions the name, surname, nickname, and maiden name of these kinspersons, as well as their link to the invalid, orphan, or widow. As such we have information about the parents, as well as in-laws from marriages and even remarriages, and the table on roles has been created for this situation.

As already mentioned, the IOW database is connected to the HPDT and shares some important tables that have standardized values. These are the ones relating to denominations (Figure 16) and marital status (Figure 17).

Listing Denominations

Name	Code			
Unclear (to be rechecked)	-7	Show	Edit	Destroy
Illegible due to palaeographic reasons	-6	Show	Edit	Destroy
Shredded paper	-5	Show	Edit	Destroy
Illegible due to bad preservation	-2	Show	Edit	Destroy
Source variable left blank	-1	Show	Edit	Destroy
Without religion	1002	Show	Edit	Destroy
Jewish	4000	Show	Edit	Destroy
Christian	6000	Show	Edit	Destroy
Roman Catholic	6110	Show	Edit	Destroy
Greek Catholic	6120	Show	Edit	Destroy
Armenian Catholic	6130	Show	Edit	Destroy
Orthodox	6200	Show	Edit	Destroy
Lutheran	6310	Show	Edit	Destroy
Anglican	6320	Show	Edit	Destroy
Calvinist (Reformed)	6330	Show	Edit	Destroy
Unitarian	6360	Show	Edit	Destroy
Other Christian	6400	Show	Edit	Destroy
illegible	8888	Show	Edit	Destroy
Unclear (cross-denominational baptisms)	9998	Show	Edit	Destroy
missing/blank	9999	Show	Edit	Destroy

New Denomination record

Figure 16: Table with denominations and codes
Source: HPDT.

Listing Marital status records

Name	Code			
Unclear (to be rechecked)	-7	Show	Edit	Destroy
Illegible due to palaeographic reasons	-6	Show	Edit	Destroy
Shredded paper	-5	Show	Edit	Destroy
Illegible due to bad preservation	-2	Show	Edit	Destroy
Source variable left blank	-1	Show	Edit	Destroy
never married/single	1	Show	Edit	Destroy
divorced	2	Show	Edit	Destroy
widowed	3	Show	Edit	Destroy
unmarried union	4	Show	Edit	Destroy
widowed living in unmarried union	5	Show	Edit	Destroy
Civil union	6	Show	Edit	Destroy
married	10	Show	Edit	Destroy
illegible or confused	8888	Show	Edit	Destroy
missing/blank	9999	Show	Edit	Destroy

New Marital status record

Figure 17. Table with marital status and codes
Source: HPDT.

In terms of occupations, the database user can choose for each entry a pre-created option from the occupation field, entered as it appears on the original source. An additional connection to the standard occupations table in the HPDT has also been constructed, allowing access to the original form, the standard and the standard English translations. In addition, historical international classification of occupations (HISCO), historical international social class scheme (HISCLASS 13 and HISCLASS 5, and social power (SOCPO) codes can be extracted for future analysis (Mandemakers et al., 2018; Figure 18). This routine has been followed every time the occupation was specified (e.g., for each invalid, widow or orphan). If the occupation is not registered, it can be added in the occupations table along with its standard name and occupational codes and can then be selected from the main tables of the IOW database.

Editing Occupation

Original names
Ziler

Standard name
Zilier

Standard eng. name
Day-labourer

Feminine
☐

HISCO code
99920

Status

Relation

Product

Hisclass 5
5

Hisclass 13
13

Socpo
1

Figure 18. Table with occupations and codes
Source: HPDT.

CONCLUSION:
PRELIMINARY RESULTS AND FUTURE DEVELOPMENTS

The IOW database has been constructed following the best practices in the field, with a source-oriented and relational design, and the information contained in the database can support a wide range of scientific investigations aimed at recovering and reconstructing the life experiences of the past population of Transylvania. The database can be a useful tool for retrieving information on several aspects related to the First World War: human losses and the numbers of those affected by the conflict, as well as aspects of military history (the timeline of mobilization, the soldier's rank, the regiment in which he served, the front where he fought), enabling the filling of important gaps about the conflict in this part of Europe.

An exploratory analysis based on the files of war widows included so far in the database has yielded some preliminary results, such as details on the early enlistment of their husbands, with 76.1% of them having been sent to the front line in 1914 as part of Infantry Regiment 32 or Infantry

Regiment 63. They participated in military operations in Galicia, Russia, and on the Western Front: 62.7% were declared missing in action, while 34.1% were presumed dead. Most deaths and disappearances occurred within the first 12 months after enrolment. They left behind 700 widows and 1,312 orphans; 54.7% of the children were between seven and 12 years old at the moment of their fathers' death/disappearance. Moreover, those affected by the conflict were, mainly, young people, with a mean age of 30.1 years in the case of women and 34.4 years in the case of men at the moment of disappearance/death (Holom, 2020: 20–28).

Furthermore, information in the database will allow for sketching portraits of the recruits, taking into account physical aspects such as height, eye and hair colour, and any other particular features available in the files. The data will also offer the possibility of investigating a series of individual characteristics of the war's victims (age, denomination and profession) and their influence on marital behaviour and fertility. Likewise, the data collected can be used for conducting research in the areas of medicine and history of medicine based on information about the types of injury, diagnoses, and clues about the psychological trauma caused by the war as assessed according to the period's medical knowledge.

Information from the database will support the assessment of individuals' attitudes to marriage and family life before and after the First World War. For example, by employing an event history analysis technique it should be possible to identify the manner in which widows and invalids overcame the difficulties and traumas of war by starting new families. The investigation could, for example, address the impact of important aspects such as the number of children and their age (in the case of widows), type of disability (in the case of invalids) and the amount of money received as a pension. Additional determinants such as age, denominational affiliation, social class, living environment, and their potential influence on the chances of marriage in the case of invalids and the remarriage of war widows could also be assessed. Regarding First World War orphans, data on pension files from our database, together with legislation on the matter, should help in reconstructing aspects relating to guardianship and gaining a more nuanced picture of those responsible for the protection and well-being of children (Holom, 2021).

While the IOW database was built, mainly, for research purposes, the information contained therein could have a social and cultural impact among the general public as well, via presentations made at events such as Heroes' Day, War Veterans' Day, or Armed Forces' Day.

The IOW database represents a reliable instrument for important developments and in the near future we expect to expand it in terms of both quantity and wider geographic and temporal coverage. It is hoped that files from all over Transylvania kept in the archives of the county prefectures and within the social insurance and state pensions offices will be integrated. Alongside information on the social categories created by the First World War, data about invalids, orphans, and widows from the Second World War will also be considered for inclusion. In the longer term, we hope that the data can be linked to information from the HPDT, which would allow for the identification and tracking of individuals in Transylvania both before and after the two world wars.

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