Blood, ideology, science and the birth of the ISBT

Hans Erik Heier
Institute of Clinical Medicine, Faculty of Medicine, University of Oslo, Oslo, Norway

Introduction
The ISBT/SITS was founded in 1937, when blood grouping and transfusion were still poorly developed, and totalitarian ideologies tried to make use of science to confirm the superiority of their systems. Furthermore, the German Nazi ideologists had developed a speculative, race-oriented view of blood, blood groups and transfusion. A review of the history of the ISBT was presented in 2015, but the text focused mainly on the development after the end of World War 2 [1]. It seems of interest, therefore, to look more closely at the process of foundation of our society and its profile in this initial phase.

Human races, ideology, blood and transfusion
Towards the end of World War 1 (WW1), the Polish couple Ludwik and Hanna Hirsfeld (sometimes written as Hirschfeld) (Fig. 1) were stuck in Thessaloniki together with thousands of allied soldiers. They were medical doctors interested in genetics and used the opportunity to ABO type about 8500 soldiers of varying origin. Surprisingly they found that the A and B properties occurred at different, but reciprocal frequencies in populations of different origins. The frequency of A decreased from west to east, while that of B increased [2].

Unfortunately, Hirsfeld and Hirsfeld used the term ‘biochemical races’ for the properties A and B in their paper. They also used ‘blood’ as a metaphor of heritage. Furthermore, they interpreted the results to suggest that mankind had originated at two different places, one in the West with preponderance of A and another in the East with preponderance of B. This was grasped by the German so-called ‘völkisch’ strain of thought which emerged from the blood and race mysticism that had become increasingly popular during the second half of the 18th century [3]. During the 1920s, the ‘Deutsche Gesellschaft für Blutgruppenforschung’ (‘German Society for Blood Group Science’) (DGB) conducted several studies which apparently showed that blood A and B properties were associated with differences in physical and mental properties at the individual as well as the population level. They defined a sharp line along the border between Germany and Poland, with the A dominated, ‘racially superior’ (‘Aryan’) people to the West of the border and the B dominated, ‘racially inferior’ to the East. Mixing of blood outside the ‘Aryan race’, especially with Jews, gypsies or other ‘inferior’ ‘races’ either by transfusion or by conception, would therefore lead to deterioration of the ‘Aryan race’ [4].

 Eugenics is the science of improving a population by controlled breeding to increase the occurrence of desirable heritable characteristics. Human eugenics was a much-focused subject also in many countries in the 1930s, also democratic ones. As an example, the Norwegian Parliament passed a law on compulsive sterilization...
of ‘inferior’ subjects in 1934, against 1 vote. Even the socialists voted for the law [5]. During WW2, blood and plasma units for U.S. soldiers were marked with the race of the donor, and ‘negro’ units were not given to ‘white’ recipients. Plasma for fractionation was not mixed between ‘races’ [6]. Thus ideas of compulsive eugenics and the physical separation of human ‘races’ existed throughout the Western world between WW1 and WW2.

In Nazi Germany, ‘Aryan’ individuals should only receive blood by transfusion from ‘Aryan’ individuals. A Jewish doctor was imprisoned in a concentration camp because he transfused an ‘Aryan’ patient with his own blood. Jewish doctors were pursued, and in 1942 dr. Rudolf Ramm, who oversaw Nazi medical education, declared ‘No man of German blood is treated by a Jewish doctor’ [7]. When blood donor centrals were formed in German cities from 1933 and onwards, all donors had to be of ‘pure Aryan descent’ [8]. During WW2, transfusions to German soldiers had to come from ‘pure Aryan donors’, usually soldiers selected specifically for this service. While blood donation in the Soviet Union, UK and the USA became a public movement of support the soldiers, no public blood donation program was established in Nazi Germany, even after Goebbels’ declaration of the ‘total war’ in 1943.

On 15 September 1935, the Nazified German Reichstag adopted unanimously the ‘Gesetz zum Schutz des deutschen Blutes und der deutschen Ehre’ (‘Law on the protection of German blood and German honour’) (Fig. 2 and 3). The laws defined ‘Deutschblütige’ (individuals of ‘German blood’) and allowed and forbidden marital relationships between ‘Deutschblütige’ and other groups. The law also defined who were to be considered Jews (Fig. 3).

It was in this sociopolitically chaotic Europe that the Italian Fascist Union of Physicians organized the first international meeting on transfusion science in Rome in 1935.

The transfusion congress in Rome in 1935

The congress convened only 11 days after the adoption of the ‘Blutgesetz’ in Germany. Ludwik Hirszfeld, who was himself a Jew, gave the opening address, which was received with great enthusiasm. Some of his words were most memorable (my translation from French) [9]:

Our science expresses not only the intellectual progress, but also the moral values of a nation. To give blood to a fellow human being is an act of compassion, it is to imagine and suffer the suffering of the other. For this reason, the interest which a nation carries in the problem of organising blood donors, allows to judge not only the culture and the spirit (of that nation), but its moral strengths. It is in our area that this unique organization of anonymous donors was created, offering their blood to the unknown suffering one.

Italy had acted admirably at the national level and formed a blood donor society on a secular and charitable
basis (Associazione dei Volontari Italiani del Sangue – AVIS) with seven thousand registered donors who were giving blood repeatedly. All Italian participants wore high boots and black shirts, and it seems that one of the goals of the congress organizers was to demonstrate this result as an example of the success of fascism [9]. Ludwik Hirszfeld wrote:

> With a feeling of performing an act of respect and a symbolic ritual of unifying nations under the aegis of Science, we were led to the Grave of the Unknown Fascist. Before we realized it, the act of International concord changed into an act of reverence for the regime. There was a moment of silence. The hands of the Italians rose up in the Fascist greeting. Before we were able to control our reflex, which was a reflex of courtesy in response to a gesture which apparently was the custom in the country playing host to us, there was a brief snap. All foreign delegations were photographed in the fixed pose of the Fascist greeting at the Grave of the Unknown Fascist. Before we became aware of it, the congress was used to propagate the praise of Fascism by science. We were unable and, unfortunately, unwilling to defend ourselves. The idea had not yet matured that this was no International courtesy but a profound symbol and that we were witnessing the subordination of science to politics [9].

> Unfortunately, the proceedings of the congress are lost, including the list of participants. It is known that in addition to Italy, Poland, France, the Soviet Union, Yugoslavia, Great Britain, the Netherlands and thirteen other nations were represented, as well as eight Red Cross societies which were planning to establish blood programs [10].

> There is no mention of German participants. In 1935, the memory of WW1 was still close, and at the congress, Germany was talked of as ‘the enemy’ [10]. Italy had been fighting on the allied side during WW1, and in 1935, the later alliance with Germany had not been formed. The presumed lack of German participation may also relate to the attitude to blood and race that had prevailed in
Germany, but which apparently had not yet been adopted into Italian fascism. Apparently, there were no discussions on blood and race during the congress.

There is also no mention of participants from overseas, for example, the USA or Canada. The only way to cross the Atlantic was by 5–7 days at sea, while participants from European countries could reach Rome quite easily by train.

Blood banks still existed only in the Soviet Union, and the concept of blood storage received limited attention. Much more attention was given to methods for direct transfusion. At the closing session, it was agreed that there was a need for an international scientific society to organize further congresses and that the next one would be in Paris in 1937 [10].

The transfusion congress in Paris in 1937

The congress convened in Paris from 20 September to 2 October, 1937. Again, the proceedings have proved unaccessible and so has the list of participants. Delegates from 29 countries and from the League of Red Cross Societies were present, including at least one American [10]. There is no mention of German delegates, but the congress was held in connection with the international exposition at which there was a large German pavilion, so some German participation cannot be excluded. There is no mention of discussions of blood and ‘race’.

The Spanish Civil War had started in 1936. In September that year Frederic Duran-Jorda had started his transfusion service in Barcelona, based on blood stored in the cold as developed by the Russians [11]. Thus, a blood bank now also existed in a Western European country. Discussions at the congress focused on blood preservation, in addition to blood groups, clinical use of blood and on organizational issues [10].

At the close of the congress professor Leopold Mayer of Brussels proposed that the Société Internationale de Transfusion Sanguine (SITS)/International Society of Blood Transfusion (ISBT) be formed. The delegates adopted the proposal. Furthermore, they decided to have a permanent office, headed by a Secretary-General, in Paris. Thus, our society was formally founded on 2 October 1937 in Paris [10].

The period 1937–1947

The first Secretary General was the Parisian haematologist professor Arnault Tzanck. Preparations were started for a congress to be held in Zürich in 1940, but the outbreak of WW2 stopped the plans [10]. The activities of the permanent office also ceased, and professor Tzanck, who was a Jew, was helped by friends to find safety in Chile [12]. Only in 1947 could the third ISBT congress convene in Torino, Italy [10].

The Nazi blood and race ideology continued to dominate Germany and Nazi-like parties and movements in other countries until 1945. In 1930, the Nazi ideologist Alfred Rosenberg had published a four-volume opus entitled ‘Der Mythus des 20. Jahrhunderts’ (‘The Myth of the 20th Century’), in which he dealt extensively with the concept ‘Blut und Ehre’ (‘Blood and Honour’). He argued that the Aryans should rule over weaker ‘races’ and avoid mixing especially with semitic ‘races’ [13]. The books were reprinted repeatedly during the 1930s. The Nazis perverted the findings of the Hirsfelds so much that in 1938 Ludwik Hirszfeld wrote as follows [14]:

I wish to separate myself from those who attach the blood groups to the mystique of race. The actual distribution of blood groups on the earth reflects the crossing of races and constitutes further proof that humanity represents a mosaic of races.

Discussion

The period between WW1 and WW2 was influenced heavily by totalitarian ideologies. In the countries ruled by such ideologies science was seen as a tool for confirmation and support of the ruling ideology [15]. In Germany, blood mysticism was a part of the Nazi ideology, while in the Soviet Union blood mysticism died out after the bizarre experiments of Alyaksandr Malinovski (‘Bogdanov’). He tried to wipe out the individual and create ‘socialist man’ by cross-transfusion of many individuals [16]. Instead, a rational and advanced transfusion service was developed under the leadership of the surgeon Ivan Shamov, also using blood stored in the cold [17,18]. In 1935, therefore, the Soviet Union was a pioneer in the field of scientific transfusion.

Italy was ruled according to fascism, another totalitarian ideology. It may seem surprising that scientists from democratic countries agreed to meet in Rome to discuss transfusion. The participation of Soviet scientists is especially surprising, since fascism and communism are usually regarded as contrary ideologies. However, in 1935 Italy was not a German ally, and blood mysticism was much less evident in Italian fascism than in German Nazism. The organizers probably had created a scientific program interesting enough for foreign participants irrespective of the ideology of their home countries.

The meeting in Rome was so much of a success from a scientific point of view that the delegates called for a new meeting two years later. They also pointed out the need for an international, scientific transfusion society, which was formally founded in Paris 2 years later.

© 2019 The Authors. ISBT Science Series published by John Wiley & Sons Ltd on behalf of International Society of Blood Transfusion, ISBT Science Series (2020) 15, 207–211
With the exception of the attempt to misuse the delegates in Rome to praise fascism, there are no indications that totalitarian ideologies got any attention from attendees at the Rome and Paris congresses. Thus, the ISBT was founded as a society for free science from the very beginning. In the ideological and political climate of the 1930s, this was a real triumph to the founders. There are no traces of blood and race ideological attitudes in the early history of our society. Given the sociopolitical situation in Europe, the founders of our society should be praised for building the SITS/ISBT on true science from the very beginning.

The introductory speech of Ludwik Hirszfeld in Rome shows that the participants saw transfusion science as more than natural science only. They recognized that blood donation is an act of morality, expressing altruism as well as personal and group identity. Today transfusion science spans from social psychology via clinical medicine to molecular biology. Few, if any other medical discipline has such a broad scientific span [19].

Participants in Rome and Paris came mainly from European countries. Also in Torino, there were but a few participants from outside Europe. Thus, ‘International’ in the ISBT sense meant ‘mainly European’ at the outset. The American Association of Blood Banks was founded in 1947, the year of the Torino congress of the ISBT. Later, the two organizations have developed differently, and formal cooperation seems remote. Fortunately, the ISBT makes us truly an international one.

References

1 Heier HE: A review of the history of the ISBT. ISBT Sci Ser 2015; 10:2–10
2 Hirschfeld L, Hirschfeld H: Serological differences between the blood of different races. The results of investigations on the Macedonian front. Lancet 1919; 194:675–679
3 Weber A. Blood is a most particular fluid: blood as the object of scientific discovery and Romantic mystification. In: Bradburne JM (ed). Blood, Art, Power, Politics, Pathology. München: Prestel Verlag, 2002:157–173. ISBN 3-7913-22600-7
4 Mazumdar PMH: Blood and soil: the serology of the Aryan racial state. Bull Hist Med 1990; 64:187–219
5 Haave P. Sterilisation 1934–1977: Coercion and volunteerism (in Norwegian). https://www.norgeshistorie.no/forste-verden/5704-og-mellomkrigsstiden/artikler/1649-sterilisering-1934-1977-tvang-og-frivillighet.html [Accessed 09-08-2019]
6 Starr D. Blood cracks like oil; in Knopf AA (eds): Blood. An Epic History of Medicine and Commerce. New York: Alfred A. Knopf, Editors 1998. ISBN 0679-41875-X
7 Starr D. Prelude to a blood bath; in Knopf AA (eds): Blood. An Epic History of Medicine and Commerce. New York: Alfred A. Knopf, Editors 1998. ISBN 0679-41875-X
8 JAMA Regular Correspondent in Berlin: Organisation of blood donors in Germany. JAMA 1935; 105: 610–611.
9 Hirschfeld L. The 1935 Blood Transfusion Congress in Rome. in Baltińska MA, Schneider WH (eds). The Story of One Life. Rochester Studies in Medical History. Rochester, NY: University of Rochester Press, 2013. ISBN978-1-58046-338-6
10 Greenwalt T. History of International Society of Blood Transfusion 1935–1995. Groningen: Stichting Transfusion Today Foundation, 2000. ISBN 90-805803-1–7
11 Duran-Jorda F: The Barcelona Blood Transfusion Service. Lancet 1939; 233:733–775
12 Starr D. War begins; in Knopf AA (eds): Blood. An Epic History of Medicine and Commerce. New York: Alfred A. Knopf, Editors 1998. ISBN 0679-41875-X
13 Verified by Deutsche Nationalbibliothek Suche nid=4193911–10 and by Virtual International Authority File (VIAF). https://viaf.org/viaf/215235039/, https://no.wikipedia.org/wiki/Der_Mythus_des_zwanzigsten_Jahrhunderts [Last accessed 10 August 2019].
14 Schneider WH: Chance and social setting in the application of the discovery of blood groups. Bull Hist Med 1983; 57:561
15 Ings S: Stalin and the Scientists. A History of Triumph and Tragedy 1905–53. London: Faber and Faber, editors 2016. ISBN 978-0-571-29008-6
16 Huestis DW: Aleksander Bogdanov: the forgotten pioneer of blood transfusion. Trans Med Rev 2007; 21:337–340
17 Bagdasarov A: Blood transfusion in the USSR. Br Med J 1942; 2:445–446
18 Heier HE: Blod! Mellom Magi, Myter og Medicin gjennom 2500 år (Blood! Between Magics, Myths and Medicine Through 2500 Years). Oslo: Kolofon Forlag, 2019. ISBN978-82-300-1943-6. Ch 4 (in Norwegian)
19 Habibi B: Transfusion yesterday: project for the third millennium? Transfus Today 1999; 41:3–4

© 2019 The Authors. ISBT Science Series published by John Wiley & Sons Ltd on behalf of International Society of Blood Transfusion, ISBT Science Series (2020) 15, 207–211