

# Michael



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**Insights and  
implications**

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# Michael Skjelderup

*Michael* is a publication series named after professor *Michael Skjelderup* (1769-1852), one of the fathers of Norwegian medicine. He was born in Hof, Vestfold in Norway as the son of a priest, and was raised in the Norwegian countryside. Because of severe speech disturbances as a boy he did not get proper schooling, but was at last accepted as an apprentice in an apothecary's dispensary in the city of Fredrikstad at the age of 16. During his youth he tried through hard work and by means of an intensive self-discipline to overcome his handicap, and he really succeeded, except for in stressed situations.

Lacking a student examination, an academic training seemed out of question, in spite of his obvious bright mind. However, in 1789 he was admitted to the new Surgical Academy in Copenhagen, where academic qualifications were not required.

From now on, his career flourished. He passed the surgical examination with the highest grade in 1794, entered positions in Copenhagen hospitals and at the University, where he defended his doctoral thesis in 1803 and was appointed professor in 1805.

The first University in Norway was founded in Christiania (now: Oslo) in 1811. Medical teaching was supposed to commence from the very beginning, and from 1814 the new medical faculty could offer medical training. Michael Skjelderup was appointed its first professor 1813, and started his teaching, mainly in anatomy in the fall of 1814, after a dramatic war time sea voyage from Denmark across the waters of Skagerrak where hostile Swedes fired at his swift sailing vessel.

As a University pioneer, he became active in several medical fields. Among other achievements, he published an authoritative textbook in forensic medicine in 1838. When he resigned in 1849, eighty years old, he had seen all Norwegian trained medical doctors in his lecture room.

Skjelderup was instrumental in building a scientific medical community in Christiania. Together with his University colleague Frederik Holst (1791-1871) he founded the first Norwegian medical journal *Eyr*, named after a Norse medical goddess, in 1826. A reading club of physicians established in 1826 was formalized into an association in 1833, the still existing Det norske medicinske Selskab (The Norwegian Medical Society), which over the decades to come played an important role in the development of the health services and of a national medicine.

*Michael* is devoted to the memory of the man who first realized the importance of a regular, national medical publication activity in Norway and implemented his ideas in 1826. *Michael* is published by the same association as was founded by Michael Skjelderup and his colleagues – Det norske medicinske Selskab.

# Insights and implications

*Michael* 2006;3:5–6.

Dear reader,

The objective of this first issue of *Michael* in 2006 is to shed light on how medical knowledge can be adopted and implemented in health care and society, and how this process may take unintended directions.

There are two main articles, both originally presented as papers at the international conference “Health between the private and the public – shifting approaches” in Oslo in 2003<sup>1</sup>. Both of them touch on side effects and consequences when medical insight is presented and perused for political purposes.

Eugenics was an upcoming science in the first decades of the 20<sup>th</sup> century. Fangerau<sup>2</sup> has studied how a medical textbook in this discipline was met by its readership and became a political tool – the alleged scientific background for harsh racial politics.

The introduction of a nutritional policy in Canada at the same time, as described by Ostry and his collaborators<sup>3</sup>, raises a series of questions of lasting interest and relevance, for example how strong should medical evidence be before large scale public health campaigns built on available knowledge are justified? And how to deal with the interplay between medicine, health and commercial considerations when different interests are at stake?

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<sup>1</sup> See the book of abstracts: Kvisvik M, Larsen Ø (eds.). *Health between the private and the public – shifting approaches*. Oslo: Det norske medicinske Selskab, 2003, and *Michael* #2, 2004.

<sup>2</sup> Fangerau H. Human reproduction and eugenics as a public health issue: The contemporary reception of a German standard textbook on racial hygiene 1921-1941. *Michael* 2006;3:7–23.

<sup>3</sup> Ostry A, Dubois L, Nathoo T. The development of nutrition policy in Canada in the 1920's. *Michael* 2006;3:28–46.

In her book review, Alvik<sup>4</sup> looks into the recent work by Paqui<sup>5</sup>, where different medical and social systems are compared. Obviously, it is an issue for discussion how far social and health care should be considered as an entity or separately, a point which may have important bearings for how sociological and medical insights can be brought into real life in the set-up of a society.

For public health sciences and for medical history, studies of how medical knowledge really functions simply are part of their *raison d'être*.

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<sup>4</sup> Alvik A. European social protection – systems in perspective. (Book review). *Michael* 2006;3:47–8.

<sup>5</sup> Paqui L. *European social protection – systems in perspective*. Compostela Group, 2004.

# Human reproduction and eugenics as a public issue: The contemporary reception of a German standard textbook on racial hygiene 1921-1941

*Michael* 2006;3:7–23

## **Summary:**

*Based on contemporary book reviews, the author analyses the reception of and impact exerted by the German standard textbook of eugenics in the inter-world-war period, the two-volume “Human Heredity” (“Menschliche Erblchkeitslehre und Rassenhygiene”, München: Lehmanns, 1921-1940) written by Erwin Baur, Eugen Fischer and Fritz Lenz. Probably, this book consolidated racial hygiene as a scientific discipline and provided an important background legitimating both racial politics and legislation during the National Socialist regime in Germany.*

## **Introduction**

Even prior to Plato writing his “Republic”, “human reproduction“ has been a public issue to some extent in the western world. The idea of controlling human breeding for the sake of a state or of future generations seems to have haunted people throughout history. However, this idea remained rather abstract until the nineteenth century. During this century the abstract vision merged with modern statistical, evolutionary and genetic theories. Out of the fusion the eugenics movement was born, leaving no aspect of human reproduction private anymore. Based on the concept of improving mankind with the help of positive and negative eugenics, eugenicists all over the world made human reproduction a public issue. “Positive eugenics” was intended to support the procreation of individuals with allegedly desirable hereditary traits, whereas “negative eugenics” sought to prevent people with alleged negative hereditary traits from breeding.<sup>1</sup>

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<sup>1</sup> For an introduction on eugenics see e.g. Paul, Diane: “Controlling Human Heredity: 1865 to the Present”, Humanities Press International, Atlantic Highlands, NJ:1995, pp. 1-21.

In Germany eugenicist ideas were popularised from the beginning of the 20<sup>th</sup> century under the term “Racial Hygiene” and these ideas were to become fundamental in the ideological foundations of the National Socialist regime.

The history of the German Racial Hygiene movement has been analysed in various aspects.<sup>2</sup> Different approaches guiding research thereby lead to differentiating interpretations of the development, institutionalisation and realisation of eugenicist thoughts in Germany. Whereas previous works concentrated on how the history of ideas related to eugenics, recent literature has added aspects of social and of political history as well as aspects of the scientific theory.<sup>3</sup>

Although the focus of research has shifted and older viewpoints had to be revised, all the authors agree on the importance and significance of one book on the German Racial Hygiene Movement: the two-volume book

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<sup>2</sup> A bibliography listing works on the history of Racial Hygiene and Eugenics in Germany has been published by Beck. Beck, C.: „Sozialdarwinismus, Rassehygiene, Zwangssterilisation und Vernichtung lebensunwerten Lebens. Eine Bibliographie zum Umgang mit behinderten Menschen im „Dritten Reich“ – und heute“ 2. Auflage Psychiatrie Verlag: Bonn 1995.

Detailed monographic works were published by: Becker, Peter E.: „Zur Geschichte der Rassenhygiene: Wege ins ‚Dritte Reich‘“ Thieme: Stuttgart 1998 und „Sozialdarwinismus, Rassismus, Antisemitismus und Völkischer Gedanke: Wege ins Dritte Reich, Teil II“ Thieme: Stuttgart 1990; Proctor, Robert N.: „Racial Hygiene: medicine under the Nazis“ Harvard University Press: Cambridge, Massachusetts 1988; Schmuhl, Hans-Walter: „Rassenhygiene, Nationalsozialismus, Euthanasie: von der Verhütung zur Vernichtung „lebensunwerten Lebens“, 1890-1945“ (Kritische Studien zur Geschichtswissenschaft, Bd. 75). 2., durchges. Auflage, Göttingen 1992; Weindling, Paul: „Health, race and German politics between national unification and Nazism, 1870-1945“ Cambridge University Press: Cambridge 1989; Weingart, Peter; Kroll, Jürgen; Bayertz, Kurt: „Rasse, Blut und Gene: Geschichte der Eugenik und Rassenhygiene in Deutschland“ Suhrkamp: Frankfurt a. M. 1992.

Shorter works are among others: Lilienthal, Georg: „Rassenhygiene im Dritten Reich. Krise und Wende“, *Medizinhistorisches Journal* 14 (1979), S. 114-134; Mann, Gunter: „Neue Wissenschaft im Rezeptionsbereich des Darwinismus: Eugenik – Rassenhygiene“, *Berichte zur Wissenschaftsgeschichte* 1 (1978), S. 101-111; Weindling, Paul: „The „Sonderweg“ of German Eugenics: Nationalism and Scientific Internationalism“, *The British Journal for the History of Science* 22 (1989), S. 321-333; Weingart, Peter: „German Eugenics between Science and Politics“, *Osiris* 5 (1989), 2<sup>nd</sup> series, S. 260-281; Weiss, Sheila Faith: „The Race Hygiene Movement in Germany“, *Osiris* 3 (1987), 2<sup>nd</sup> series, S. 193-236.

<sup>3</sup> For a short historiographic overview see Kröner, Hans-Peter: „Von der Rassenhygiene zur Humangenetik: das Kaiser-Wilhelm-Institut für Anthropologie, menschliche Erblehre und Eugenik nach dem Kriege“, G. Fischer: Stuttgart 1998, S. 9-13. An older but still classical analysis is to find at Farrall, Lyndsay: „The history of eugenics: a bibliographical review“, *Annals of Science* 36 (1979), 111-123.

“Human Heredity” (“Menschliche Erblchkeitslehre und Rassenhygiene”) by Erwin Baur, Eugen Fischer and Fritz Lenz. In the historiography, this book is considered to be the contemporary “standard textbook” of German Eugenics.

Existing works seem to justify this assessment, but a quantifying analysis of the contemporary reception of this book, as represented in contemporary reviews, has not been performed yet. So far analyses of reviews only exist in an unsystematic, fragmented form.<sup>4</sup> The aim of this study is to close this gap. After a short presentation of the book and its contents, a systematic analysis of contemporary reviews is performed. Leaving aside social, personal or political factors influencing the reviewers, the general acceptance or disapproval of the book by its contemporaries shall be quantified. In addition the public networks reviewing and thus popularising the book will be identified. Finally the process which made the book a “standard textbook” will be reconstructed.

**“Human Heredity” by Erwin Baur, Eugen Fischer and Fritz Lenz**  
On the initiative of the nationalistic publisher J. F. Lehmanns (1864-1935), Erwin Baur (1875-1933), Eugen Fischer (1874-1967) und Fritz Lenz (1887-1976) came together to publish a comprehensive textbook on Human Heredity and Racial Hygiene in 1921 (the book is named BFL in

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<sup>4</sup> Loren R. Graham mentions the Russian reception of the BFL (Graham, Loren R.: „Science and Values: The Eugenics Movement in Germany and Russia in the 1920s”, *The American Historical Review* 82 (1977), S. 1133-1164).

Kröner, Toellner and Weisemann quote citing Proctor eight reviews. (Kröner, Hans-Peter; Toellner, Richard; Weisemann, Karin: „Erwin Baur – Naturwissenschaft und Politik. Gutachten zu der Frage, inwieweit Erwin Baur in die geistige Urheberchaft der historischen Verbrechen, die der Nationalsozialismus begangen hat, verstrickt war oder nicht“, Münster 1991, S. 34-37).

Lösch, who analysed Fischer’s participation in the BFL, closely looks at four reviews and cites another eight. (Lösch, Niels C.: „Rasse als Konstrukt: Leben und Werk Eugen Fischers“, (Europäische Hochschulschriften: Reihe 3, Geschichte und ihre Hilfswissenschaften, Bd. 737), Peter Lang: Frankfurt am Main 1997, S. 136-151).

Proctor (footnote 2, pp. 57-59) quotes 15 reviews. One of them is not a review but an obituary by Hans Stubbe for Erwin Baur. (Stubbe, Hans: „Nachruf Erwin Baur“, *Fortschritte der Medizin* 51 (1933), S. 1143).

Weingart, Kroll, Bayertz (s. Anm. 2, S. 316-319) quote two contemporary comments on the BFL. One of them is a book review, the other is an comment taken from a short essay by Karl Saller on the „Status and Tasks of Eugenics“ (my translation). (Saller, Karl: „Stand und Aufgaben der Eugenik“, *Klinische Wochenschrift* 12 (1933), S. 1041-1044).

the following).<sup>5</sup> When the book came out, it represented the spirit of the age. The public during that time showed a growing interest in eugenicist questions and the process of institutionalising Racial Hygiene as an academic discipline was about to start.<sup>6</sup>

Erwin Baur was an internationally recognised researcher in the field of breeding. By the time the book was published he was Director of the first German University Institute for the Theory of Heredity in Friedrichshagen.<sup>7</sup> The anthropologist Eugen Fischer had become famous with his research work on South African “half-breeds” (Rehobother Bastards) with which he claimed to have verified of Mendel’s laws in human beings.<sup>8</sup> Fritz Lenz had held a professorship for hygiene since 1919, and became the first associated professor for Racial Hygiene in Munich in 1923.<sup>9</sup> For the first time a geneti-

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<sup>5</sup> Letter by Fritz Lenz to his wife. Transcript kindly offered by his son H. Lenz.

On the life and works of J. F. Lehmanns see e.g. Stark, Gary D.: „Der Verleger als Kulturunternehmer: Der J. F. Lehmanns Verlag und Rassenkunde in der Weimarer Republik“, *Archiv für Geschichte des Buchwesens* 15 (1976), S. 291-318 and Thomann, Klaus-Dieter: „Dienst am Deutschtum - der medizinische Verlag J. F. Lehmanns und der Nationalsozialismus“ in: Bleker, Johanna; Jachertz, Norbert (Eds): „Medizin im ‚Dritten Reich‘“, pp. 54-69, 2., erweiterte Auflage, Thieme: Köln 1993 (1985, 1993). Special aspects and facets in the publishing policy of Lehmanns and a detailed analysis of the popularisation of Racial Hygiene in Germany by Lehmanns are given by Stöckel, Sigrid (Ed.): „Die ‚rechte Nation‘ und ihr Verleger. Politik und Popularisierung im J. F. Lehmanns Verlag 1890-1979“, *Lehmanns Media Berlin* 2002

<sup>6</sup> See footnote 2.

<sup>7</sup> On Erwin Baur see: Charles Coulston Gillispie, ed., *Dictionary of Scientific Biography*, 18 vols. (New York 1970-1990), vol 17, Suppl. 2, 1990); Reimar Gilenbach, “Erwin Baur, eine deutsche Chronik,” in *Arbeitsmarkt und Sondererlaß: Menschenverwertung, Rassenpolitik und Arbeitsamt*, ed. Götz Aly, Matthias Hamann, Susanne Heim, Ahlrich Meyer (Beiträge zur nationalsozialistischen Gesundheits- und Sozialpolitik, Bd. 8, Berlin, 1990), pp. 184-197; Rudolf Hagemann, “Zum 100. Geburtstag des Genetikers Erwin Baur,” *Leopoldina*, 1978 (1975), 21: 179-187; Hans-Peter Kröner, Richard Toellner, Karin Weisemann, Erwin Baur – Naturwissenschaft und Politik. Gutachten zu der Frage „inwieweit Erwin Baur in die geistige Urheberchaft der historischen Verbrechen, die der Nationalsozialismus begangen hat, verstrickt war oder nicht“ (Köln: MVR Druck, 1994); Baur’s style of scientific thought and his life are described by Harwood, Jonathan, “Styles of Scientific Thought: The German Genetics Community 1900-1933”, University of Chicago Press: Chicago, London 1993, pp. 228-273

<sup>8</sup> Detailed biographies of Fischer are to be found by Lösch (s. footnote 4) and Gessler, Bernhard: „Eugen Fischer (1874-1967): Leben und Werk des Freiburger Anatomen, Anthropologen und Rassenhygienikers bis 1927“ (Tröhler, U./ Leven, K.-H. (Eds.): *Medizingeschichte im Kontext Band 4*), Peter Lang: Frankfurt 2000.

<sup>9</sup> On Fritz Lenz see: Peter Emil Becker, *Zur Geschichte der Rassenhygiene*, pp. 137-218 and Renate Rissom, *Fritz Lenz und die Rassenhygiene* (Univ. Diss., University of Mainz, 1982) also (*Abhandlungen zur Geschichte der Medizin und der Naturwissenschaften*, H. 47, Husum, 1983), also Proctor (s. footnote 2)



cist, an anthropologist and a hygienist had joined forces to give a synopsis over the current knowledge about human heredity and racial hygiene.

Their textbook consisted of two volumes and five different editions were published between 1921 and 1940.<sup>10</sup> The fifth edition was never finished. The published section was the second half of the first volume, which had been compiled by even more authors.<sup>11</sup> In the first volume the authors intended to give a scientific basis for their second volume which was dedicated to the political issues of “practical racial hygiene”.<sup>12</sup> While the first volume consisted of chapters written by Baur, Fischer and Lenz, the second volume was the single work by Fritz Lenz.

To open the first volume, Erwin Baur presents an overview of the general theory of inheritance. He gives an introduction to Mendel’s laws and explains Morgan’s experiments on *Drosophila melanogaster* (fruit flies) whilst mentioning his own experiments on *Antirrhinum majus* (snapdragon). Following this, Fischer describes the varying characteristics of human beings, applying anthropological criteria. On this basis he classifies different human races. It is an important fact that he points out hereditary criteria in characterising races in contrast to the classical anthropology which merely used to compare anatomical proportions.<sup>13</sup>

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<sup>10</sup> Baur, Erwin; Fischer, Eugen; Lenz, Fritz: „Grundriss der menschlichen Erblchkeitslehre und Rassenhygiene“.

Band 1: „Menschliche Erblchkeitslehre“, 1. Auflage München 1921, 2. Auflage München 1923, 3. Auflage München 1927, „Menschliche Erblehre“, 4. Auflage, München 1936.

Band 2: „Menschliche Auslese und Rassenhygiene“, 1. Auflage München 1921, 2. Auflage München 1923, 3. Auflage München 1931, 4. Auflage (unveränderter Nachdruck der 3. Auflage) 1932.

5. Auflage: 1. Band 2. Hälfte „Erbpathologie“, München 1940.

<sup>11</sup> Warwas and Lohff found that there was a general breakdown in the number of eugenics literature published by J. F. Lehmanns after 1940. Facing these data they are of the opinion that the publishing house concentrated on literature important for the war. Maybe this is the reason why a fifth edition of the other parts of the BFL has never been realised. Lohff, Brigitte; Warwas, Roman: „’Man brauchte sich nicht umzustellen...’. Die Monographien im J. F. Lehmanns Verlag von 1933-1945.“ In „Die ‚rechte Nation‘ und ihr Verleger : Politik und Popularisierung im J.F. Lehmanns Verlag, 1890-1979“ edited by Sigrid Stöckel, 207-239. Berlin 2002, pp. 207-239, see footnote 5.

<sup>12</sup> Preface BFL 1<sup>st</sup> edition, 1<sup>st</sup> volume, p. 2; 3<sup>rd</sup> edition, 2<sup>nd</sup> volume, p. VIII

<sup>13</sup> Positive comments on this “modern” view of anthropology are given by e.g. Max Marcuse, Zeitschrift für Sexualwissenschaft, 1921, 8: 232-7; A. Harrasser, Der Gerichtssaal, 1936, 108: 286-8; Agnes Bluhm, Die Naturwissenschaften, 1937, 25: 335-6; Otmar von Verschuer, Zeitschrift für Morphologie und Anthropologie, 1937, 36: 362

Lösch, Leben und Werk (footnote 4) considers this to be the main attribute of Fischer’s anthropology, which makes it stand out against the purely measuring, anatomical proportions comparing, classical anthropology.

All of the subsequent chapters were written by Fritz Lenz, and they could stand alone as a book in their own right. The core of his work in the first volume is a chapter about hereditary illnesses which grew from edition to edition and was kept up-to-date over the years. This encyclopaedic collection of all known hereditary diseases at that time, was extended from 93 pages in the first edition to 512 pages in the fifth edition. It is followed by a section on “Hereditability of intellectual gifts”. In this chapter Lenz follows a strategy that Garland Allen has described as the usual argumentation of eugenicists. Lenz forms a hierarchy of taxonomically defined human races (see Fischer’s chapters) based on “cultural value”. “Cultural value” was measured by him according to the prejudices in the contemporary German middle class.<sup>14</sup> Thus he develops a value-oriented hierarchy on the basis of a taxonomic hierarchy.<sup>15</sup> As proof for his theses he refers to the results of intelligence tests, biological data and observed living conditions, which he interprets in a biological way. He considers them to be genetically determined.<sup>16</sup>

In the second volume Lenz exposes the eugenicist theories of biological and sociological selection and degeneration. He suggests measures for private and public racial hygiene. On the basis of the biological data given in the first volume, Lenz outlines the complete program of racial hygiene aimed at the improvement of man. Measures he depicts range from education, influencing world views and tax politics to sterilisation, abortion, and the prohibition of marriages.

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<sup>14</sup> See e.g. Weiss, Sheila F.: “Race and Class in Fritz Lenz’s Eugenics”, *Medizinhistorisches Journal* 27: 5-25 (1992)

<sup>15</sup> On the eugenic praxis of abusing different hierarchies for reasoning their hypotheses see Allen, Garland E.: “The Misuse of Biological Hierarchies: The American Eugenics Movement, 1900-1940”, *History and Philosophy of Life Sciences* 5: 105-128 (1983)

<sup>16</sup> This praxis has already been criticised by contemporaries. Hankins, (Hankins, Frank H. Review in the *American Sociological Review* 3 (1938), pp. 147-8): „As a whole the work is useful for its summaries of numerous researches on human inheritance, being more comprehensive in this respect than any single work in English. Its value, however, is seriously marred by its frequently uncritical acceptance of genealogical data...” or Muller (Muller, Hermann J.; Review in the *Birth Control Review* 17 (1933), pp. 19-21): „Intelligence quotients, which are now known to be strongly influenced by training, serve as their courts of highest appeal. In addition, they twist the records of history and anthropology so as to favor the preconceptions born of their own egotism.”, see also Zurukzoglú (Zurukzoglú, Stavros; Review in *Allgemeines Statistisches Archiv* 21 (1931), p. 471; Fetscher (Fetscher, Rainer; Review in *Zeitschrift für Sexualwissenschaft* 14 (1927), p. 91 and Martin (Martin, Rudolf; *Archiv für Rassen- und Gesellschaftsbiologie* 15 (1923), pp. 322-28.

## The reviews

As the BFL is said to be one of the books that had an important impact on the racial hygiene movement, it is attempted here to assess the opinions held by Baur's, Fischer's and Lenz's contemporaries. Especially its popularisation and acceptance in different public circles will be reconstructed. A systematic review analysis served as a tool.<sup>17</sup> The acceptance or rebuttal of the book and, of course, the idea of making human reproduction a public issue (as expressed in the book) will be quantified by this means.

It was possible to trace a total of 325 book reviews on Baur, Fischer and Lenz's publication. 28 of these were published in other languages than German. In order to harmonise the sample for the reconstruction of the circles involved in the popularisation of the BFL, the non-German reviews were excluded from the sample. All the reviews had been published between 1921 and 1940. The major source was the review section (section C) of the "International Bibliography of Periodical Literature".<sup>18</sup> This is an extensive and comprehensive bibliography of the leading German and foreign journals of various fields of knowledge and science.<sup>19</sup> Therefore, the bibliography offers an adequate instrument to assess the German and foreign ac-

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<sup>17</sup> The method is discussed in Fangerau, Heiner: "Making Eugenics a Public Issue: The Construction of a Standard Textbook by Reviews, 1921-1940", *Science Studies* 18 (2): 46-66.

<sup>18</sup> Felix Dietrich, ed., *Bibliographie der Deutschen Rezensionen mit Einschluß von Referaten und Selbstanzeigen, 1.1900-77.1943* (Osnabrück, 1900-1943; reprint, New York, 1962). (*Internationale Bibliographie der Zeitschriftenliteratur [IBZ] aus allen Gebieten des Wissens Abt. C: Bibliographie der Rezensionen und Referate*).

This is section C of an international bibliography called "Internationale Bibliographie der Zeitschriftenliteratur". Felix Dietrich, ed., *Internationale Bibliographie der Zeitschriftenliteratur*, 128 vols. (Osnabrück, 1896-1964). Reviews, reports and abstracts are included in this section C.

<sup>19</sup> In the year 1896 the bibliography contained 8500 articles which had been published in about 275 mostly scientific German journals. (Dietrich Abt. A., 1.1896). The list of included periodicals was expanded over the years and suggestions for journals to be added were considered and accepted. According to the editors the bibliography strived for „most possible completeness“ with respect to what seemed necessary and possible to record. This had the effect that in the year of the BFL's first edition 2000 different German and from the year 1925 on more than 1200 foreign periodicals had been registered. (Dietrich Abt. C, 1921, 1925/26 „List of journals“). Concerning the foreign journals the editors tried to achieve most possible completeness in the inclusion of publications listed in the "Total-Catalogue of foreign Journals" ("Gesamtverzeichnis der ausländischen Zeitschriften"). (Dietrich Abt. C, vol. 44, 1925/26)

An Index like the *Index medicus* (*Index medicus*. A monthly [1921ff.: quarterly] classified record of the current medical literature of the world, (New York et al., 1897-1927 and continuation) was not appropriate for this research project because it does not include book reviews.

ceptance of the theses given in the BFL. Furthermore the quantitative and qualitative analysis of the critiques makes it possible to reconstruct the separate stages on the book's way to become a corner stone of the racial hygienist's propaganda.

## Results

Due to the structure of the book as a two-volume work, reviews were published either on the first, the second or both volumes. Most of the 297 German (language) reviews critiqued the 3<sup>rd</sup> edition of the BFL. 96 of them had been published on this edition between 1927 and 1931. An English translation of the first volume of the BFL titled "Human Heredity" was published in 1931.<sup>20</sup> One German review on this translation could be traced (12 English). In 1932, only one year after the third edition, the fourth edition of the second volume was made available as a reprint. As such it only received two reviews. The most frequently reviewed single volume was the first volume of the fourth edition with 73 reviews.

In accordance with the works by Günther<sup>21</sup> and Kroll<sup>22</sup>, the number of reviews per edition seems to reflect the status of the institutionalisation of racial hygiene in Germany. There was an increase in reviews until the third edition (1927/ 1931) - the time when the eugenics movement in Germany had reached the zenith of its institutionalisation, as demonstrated in the foundation of the "Kaiser Wilhelm Institute for Anthropology, Human Heredity and Eugenics". With the declining need for institutionalisation the number of reviews decreased (table 1).

*Table 1: Number of reviews per edition*

	1 <sup>st</sup> edition (1921)	2 <sup>nd</sup> edition (1923)	3 <sup>rd</sup> edition (1927/1931)	4 <sup>th</sup> edition (1932/1936)	5 <sup>th</sup> edition, 1 <sup>st</sup> vol. 2 <sup>nd</sup> half (1940)
<b>Both volumes</b>	11	19	2	0	0
<b>1<sup>st</sup> volume</b>	14	15	46	73	39
<b>2<sup>nd</sup> volume</b>	12	16	47	2	0
<b>Human Heredity</b>	0	0	1	0	0
<b>Total</b>	37	50	96	75	39

<sup>20</sup> Paul, Eden, Paul, Cedar: „Human Heredity“, New York 1931.

<sup>21</sup> Günther, Maria: „Die Institutionalisierung der Rassenhygiene an den deutschen Hochschulen vor 1933“ Univ. Diss. Med. Fak. Mainz 1982, (see diagram on p. 63).

<sup>22</sup> Kroll, Jürgen: „Zur Entstehung und Entwicklung einer naturwissenschaftlichen und sozialpolitischen Bewegung: Die Entwicklung der Eugenik/ Rassenhygiene bis zum Jahre 1933“ Univ. Diss. Tübingen 1983.

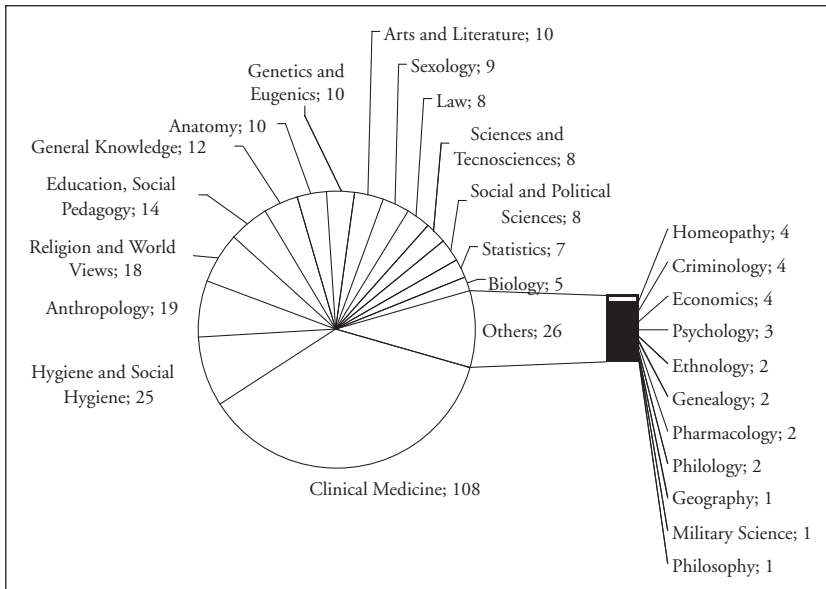


Figure 1: Number of journals covering different subject areas in the reception of the BFL

As the racial hygiene movement originated from different theories as a conglomeration of distinct sciences and humanities,<sup>23</sup> reviews had been published in multiple journals of miscellaneous orientation. However, (clinical-)medical journals predominated in reviewing the BFL (n=108). Without counting the hygiene-related and anatomical publications as medical periodicals, they add up to more than one third of all journals (table 2).

To make a deeper analysis of the book's acceptance within different disciplines - and thus different publics - possible, the identified 26 disciplines of the journals were grouped in six categories (see table 2). The categories were formed according to the faculties listed in the common German directory of academic institutions and academic personnel of the years 1928/29 (Kürschners Deutscher Gelehrten-Kalender 1928/29).<sup>24</sup>

<sup>23</sup> E.g. Hans-Walter Schmuhl, *Rassenhygiene* (n. 2), pp. 70ff., Kroll, J. *Zur Entstehung und Entwicklung* (n. 23) p. 22

<sup>24</sup> Lüdtke, Gerhard: „Kürschners Deutscher Gelehrten-Kalender 1928/29“, 3. Ausgabe, Berlin und Leipzig 1928/1929.

*Table 2: Disciplines grouped according to Kürschners Gelehrtenkalender*

Discipline	Number of reviews
Clinical Medicine	108
Theoretical Medicine (Homeopathy; Pharmacology; Hygiene and Social Hygiene; Anatomy; Sexology)	50
(Natural) Sciences (Anthropology; Biology; Genetics and Eugenics, Statistics, Sciences and Tecnosciences)	49
General Public Knowledge General Knowledge; Genealogy; Geography; Arts and Literature; Religion and World Views)	43
Social Sciences, Economics and Humanities Psychology; Education, Social Pedagogy; Social and Political Sciences; Economics; Philosophy)	30
Law and others Military Science; Criminology; Law; Ethnology; Philology	17

Here again “Clinical Medicine” is dominating the field. It is still the discipline with the highest number of reviews.

The medical dominance becomes even clearer taking into account the reviewers themselves. The allotment of medical doctors as a proportion of all verified reviewers – all of them academically trained authors<sup>25</sup>- is more than 50% (table 3). The reason for that is that medical doctors published their critiques in both medical and non-medically orientated journals.

The dominance of medicine reflects the high interest doctors had in eugenics. This interest was partly grounded in the widening of the nosological spectrum, by the identification of hereditary diseases, and partly due to the fact that eugenic measures were considered as prophylactic therapeutic interventions.

The large number of reviews does not allow for a detailed description of single reviews. However trends in the evaluation of the BFL by the identi-

<sup>25</sup> A list of the reviewers who were traceable with short biographies as well as a list of all reviews is given by Fangerau, Heiner: „Etablierung eines rassenhygienischen Standardwerkes 1921-1941: Der Baur-Fischer-Lenz im Spiegel der zeitgenössischen Rezensionsliteratur“ (Marburger Schriften zur Medizingeschichte Bd. 43), Peter Lang: Frankfurt a. M. 2001.

*Table 3: Subject specialties and academic training of the reviewers*

Specialty	N
Medical Doctors	97
Natural Scientist(1) Zoologist (7), Botanist (3), Geneticist (1), Biologist (1), Chemists (1)	15
Anthropologists (5 of them MDs)	14
Lawyers	5
Pedagogues	5
Sociologists	4
Statisticians	2
Psychologists	1
Others: Vicar (1), Writer (1), Philosopher (1)	3

fied subject categories can be analysed and quantified. Two categories help to characterise the reviews:

1. Orientation of the reviews in content:

In reference to the content of the BFL, the reviewers concentrated on special topics of the book according to their interest. Roughly four different focal points could be traced:

- a) Reviews concentrating on aspects of racial hygiene, race theory, racial anthropology and racial ideology.
- b) Reviews focusing on hereditary diseases or human heredity in general. They are mostly emphasizing the reviewer’s special field and are, therefore, called “concentrating on subject specific issues”.
- c) Reviews combining aspects a) and b).
- d) Reviews not fitting in any of the categories above.

2. Evaluation:

Five levels of agreement were defined schematically by looking at the reviews in terms of their position in relation to BFL. They range from full agreement (positive review) to total refusal (negative review) of the book. Undecided reviews could be found in the middle of this scale. Reviews not evaluating the book at all were given a separate grouping.

The analysis of the reviews according to the given categories reveals that the majority of the reviewers focused on questions surrounding racial hygiene-racial theory and that the vast majority evaluated the book positively (table 4). Although there are slight differences in the acceptance of the book in the identified disciplines the general evaluation is positive in all disciplines.

*Table 4: Quantitative analysis of the reviews according to three categories defined above (all data in %)*

Discipline	Content	Total	+	(+)	+/-	(-)	-	Ø
General Public Knowledge	Concentrating on Subject Specific Issues	7,0%	4,7%	2,3%	0,0	0,0	0,0	0,0
	Combining both aspects	7,0%	7,0%	0,0	0,0	0,0	0,0	0,0
	Concentrating on Racial Hygiene	72,1%	46,5%	16,3%	4,7%	0,0	0,0	4,7%
	Neither	14,0%	11,6%	2,3%	0,0	0,0	0,0	0,0
	Total	100,0%	69,8%	20,9%	4,7%	0,0	0,0	4,7%
Social Sciences, Economics and Humanities	Concentrating on Subject Specific Issues	3,3%	3,3%	0,0	0,0	0,0	0,0	0,0
	Combining both aspects	13,3%	6,7%	6,7%	0,0	0,0	0,0	0,0
	Concentrating on Racial Hygiene	83,3%	53,3%	16,7%	3,3%	3,3%	6,7%	0,0
	Neither	0,0	0,0	0,0	0,0	0,0	0,0	0,0
	Total	100,0%	63,3%	23,3%	3,3%	3,3%	6,7%	0,0
Law and others	Concentrating on Subject Specific Issues	11,8%	11,8%	0,0	0,0	0,0	0,0	0,0
	Combining both aspects	23,5%	11,8%	5,9%	5,9%	0,0	0,0	0,0
	Concentrating on Racial Hygiene	58,8%	58,8%	0,0	0,0	0,0	0,0	0,0
	Neither	5,9%	5,9%	0,0	0,0	0,0	0,0	0,0
	Total	100,0%	88,2%	5,9%	5,9%	0,0	0,0	0,0
Clinical Medicine	Concentrating on Subject Specific Issues	27,8%	15,7%	7,4%	1,9%	0,9%	0,9%	0,9%
	Combining both aspects	17,6%	13,9%	2,8%	0,9%	0,0	0,0	0,0
	Concentrating on Racial Hygiene	36,1%	27,8%	6,5%	0,9%	0,0	0,0	0,9%
	Neither	18,5%	16,7%	0,0	0,0	0,0	0,0	1,9%
	Total	100,0%	74,1%	16,7%	3,7%	0,9%	0,9%	3,7%



Discipline	Content	Total	+	(+)	+/-	(-)	-	Ø
Theoretical Medicine	Concentrating on Subject Specific Issues	8,0%	8,0%	0,0	0,0	0,0	0,0	0,0
	Combining both aspects	10,0%	2,0%	6,0%	2,0%	0,0	0,0	0,0
	Concentrating on Racial Hygiene	54,0%	32,0%	4,0%	2,0%	8,0%	2,0%	6,0%
	Neither	28,0%	20,0%	0,0	0,0	0,0	0,0	8,0%
	Total	100,0%	62,0%	10,0%	4,0%	8,0%	2,0%	14,0%
(Natural) Sciences	Concentrating on Subject Specific Issues	16,3%	8,2%	8,2%	0,0	0,0	0,0	0,0
	Combining both aspects	20,4%	12,2%	6,1%	0,0	0,0	0,0	2,0%
	Concentrating on Racial Hygiene	46,9%	26,5%	16,3%	2,0%	2,0%	0,0	0,0
	Neither	16,3%	14,3%	0,0	0,0	0,0	0,0	2,0%
	Total	100,0%	61,2%	30,6%	2,0%	2,0%	0,0	4,1%

Reviews orientated towards issues surrounding racial theory were dominating in all subject categories. The highest proportion of these “eugenic reviews” was reached within the field of the “Social Sciences and Humanities” (83,3%). The lowest amount of these reviews is given within the Clinical-medical field (36,1%). Clinical-medical reviews concentrate on subject specific issues surrounding questions of hereditary diseases. Reviewers focusing on aspects of racial theory more often commented directly on the BFL than reviewers concentrating on subject specific issues.

According to the structure of the BFL the second volume received more reviews concentrating on aspects of racial theory and racial hygiene, whilst the first volume received more subject specific reviews. The fifth edition (1st vol., 2nd half) being mostly an encyclopaedia of hereditary diseases (as the parts of Baur and Fischer are missing) received 26 (66.6%) reviews concentrating on subject specific issues.

This analysis of the German speaking evaluation of the BFL revealed that amongst the reviewers there was an overwhelming acceptance of the book: 260 reviews with a positive tendency (87.5%) as opposed to 11 negative (3.7%) reviews. The most positively evaluating disciplines were the ones categorised as “Law and others”, whereas the (yet still small) highest amount of negative reviews was to be found within the Social Sciences and Theoretical Medicine. The ratio of positive and negative reviews remains basically the same from edition to edition. Whilst one might expect a shift

towards more positive evaluations following 1933 (when the national socialist regime began), this was not evident from the analysis; Levels of acceptance of the book remained the same, either side of this event.

### **How did the BFL become the “standard textbook”?**

That the BFL could become a “standard textbook” of its time was not only due to the economic instinct or the political commitment of its publisher, or due to the scientific reputation of the three authors, but was also a result of the large number of positive reviews popularising the work. In the act of promoting the book, it was of great importance that the reviewers (like the authors) brought to bear their scientific reputation and their social prestige: By supporting this publication, they advocated racial hygiene.

The method of how journals reviewing the “Textbook on Human Heredity and Racial Hygiene” made it a standard work, seems to accord to a pattern: Step by step, from edition to edition, it was promoted as “recommended in general” right through to “outstanding”, “a masterpiece” and “the standard work”. Honorary titles like “our Baur-Fischer-Lenz” did more than was necessary to let the book seem accepted and favoured by experts and specialists.

In one of the first critiques dealing with the first edition, Otmar von Verschuer called the first volume “a valuable book”.<sup>26</sup> The contents of the same was labelled “a thorough piece of work” by Ernst Rüdin.<sup>27</sup> (Otmar von Verschuer should become a co-author of the later fifth edition). The anthropologist G. Kraitschek praised the second edition as “an exquisite work”.<sup>28</sup> The third edition subsequently received the attribute “standard work/treatise/compendium” 15 times and Eugen Bleuler characterised it as “... the systematic basis for human heredity and racial hygiene in general ...”.<sup>29</sup> Viktor Lebzelter noted, whilst talking about the fourth edition that the book “... almost has an official character in Germany ...”<sup>30</sup> before Karl Thums addressed the fifth edition as “standard treatise”, “our Baur-Fischer-Lenz” and a “classical one and only work in the medical world’s literature”.<sup>31</sup>

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<sup>26</sup> Otmar von Verschuer, *Akademische Blätter*, 1921, 36: 150

<sup>27</sup> Ernst Rüdin, *Münchener medizinische Wochenschrift*, 1921, 68: 1297-99

<sup>28</sup> Gustav Kraitschek, *Mitteilungen der anthropologischen Gesellschaft in Wien*, 1922, 54: 144

<sup>29</sup> Eugen Bleuler, Review in *Münchener medizinische Wochenschrift*, 1927, 74: 1287-8

<sup>30</sup> Viktor Lebzelter, Review in *Mitteilungen der anthropologischen Gesellschaft in Wien*, 1936, 67: 124-5

<sup>31</sup> Karl Thums, Review in *Münchener medizinische Wochenschrift*, 1941, 88: 658

In 47 of the 325 analysed reviews the title “standard work” was awarded to the BFL. As early as in 1922 this term had been used for the first time by the dermatologist E. Meirowsky when he gave a report on the first edition.<sup>32</sup> The shortened form “Baur-Fischer-Lenz” which became a standard, labelled with attributes like “the great”,<sup>33</sup> “the well-known”<sup>34</sup> or “the classical”<sup>35</sup>, had been used for the first time in a review on the 2<sup>nd</sup> edition given by the “Zeitschrift für Kinderforschung” in 1924.<sup>36</sup>

## Conclusion

This quantitative analysis of reviews on the “Baur-Fischer-Lenz” does not say much about the political reception of the book. Neither does it give information about the personal views of single reviewers on the book, nor is it able to give details on single aspects of agreement or criticism.<sup>37</sup> But this analysis is able to give an overview of the general acceptance of the book among its contemporaries, as it is reflected in reviews from a clearly defined collective of reviewers. Furthermore, the public within which the work was popularising can be clearly identified in terms of academic disciplines.

The group of reviewers is, as far as their level of education is concerned, a relatively homogeneous group. Taking into account that most of them were educated medical doctors, the group becomes even more homogeneous. All of them belong to the collective dealing with Racial Hygiene and one can expect that they were the ones dominating the discourse on eugenics in Germany. Among this group a controversial discussion about the BFL did not take place. A vast acceptance of the theses lined out by Baur, Fischer and Lenz in their book is to be found. Critical comments were rare and the vast majority welcomed the book and its theses. Thus, the first question of this paper whether the BFL can be considered as an important book for the German Racial Hygiene movement can be – taking the large number of reviews analysed – answered positively.

A further hypothesis one might derive from the given data, is that the collective of reviewers willingly made the BFL a standard textbook to foster professionalisation and institutionalisation of their field - knowing that

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<sup>32</sup> Emil Meirowsky, Review in *Dermatologische Wochenschrift*, 1922, 74: 120-3

<sup>33</sup> A. H., Review in *Ruhr und Rhein Wirtschaftszeitung*, 1931, 12: 791

<sup>34</sup> Hans Glatzel, Review in *Kongresszentralblatt für die gesamte Innere Medizin*, 1940, 104: 673

<sup>35</sup> Berthold Ostertag, Review in *Medizinische Klinik*, 1941, 37: 339

<sup>36</sup> Walter Scheidt, Review in *Zeitschrift für Kinderforschung*, 1924, 28/ Ref.: 17-8

a “profession” ought to have a standard textbook. In accordance with this hypothesis Weingart, Kroll and Bayertz are of the opinion that, with the publication of the BFL, the racial hygiene movement had obtained its own “Charter of heredity”. The book gave contemporary account of the national and international “state of the art” of racial hygiene and human heredity and it combined the very topics related to this new discipline. Thus, it helped to immunise the racial hygiene movement against criticism of its scientific and academic nature. After the second edition of the BFL in 1923, objections could only be put forward with regard to technical aspects of eugenic measures or with regard to the current state of the art.<sup>37</sup> If one includes the direction of eugenic conclusions on the ground of genetics (e.g. criticisms inherent in the debate about “positive” or “negative” eugenics) in those “technical aspects”, the analysis of the reviews of the BFL confirms Weingart et al.’s estimation.

Furthermore, the subject categories of the journals publishing reviews on the BFL can be interpreted in accordance with the reviewer’s intention to foster professionalisation and institutionalisation of eugenics by positively evaluating the BFL. Most of the identified disciplines were linked in either way to eugenics or served as sources for eugenicists’ ideas. By reviewing the compendium on racial hygiene in these journals the reviewers tried to foster the professionalisation of the new field by demarcating its contents and its impact from the disciplines it came from. The new discipline of racial hygiene represented by the BFL should be popularised within academic circles as a new scientific specialty still linked to other scientific disciplines.

Although this paper does not say anything about the political impact of the BFL it can be argued that the acceptance of the reviewers helped the book to become an integral part in political thinking of its time. The popularisation of the book as a standard work, defining the new discipline, demarcating it from other disciplines, consolidated the BFL’s status as the book which defined Racial Hygiene and its political implications. In addition it can be said that the book and the reviewers prepared the ground for the eugenic legislation in Germany after 1933. When the plan to make reproduction a public issue was turned into practice by the new regime,

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<sup>37</sup> This can be found in Fangerau, H. (see footnote 25)

<sup>38</sup> Weingart et al., *Rasse, Blut und Gene* (see footnote 2), pp. 312-319

many of the reviewers happily agreed and it was stated that the “former editions of the BFL played an essential role in forming a scientific basis for the national socialist, political and ideological upheaval in Germany”.<sup>39</sup>

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<sup>39</sup> Verschuer, O. v.; Review in Zeitschrift für Morphologie und Anthropologie, 1937, 36: 362. (Translation by H.F. of “Die bisherigen Auflagen...hatten wesentlichsten Anteil an der wissenschaftlichen Unterbauung des nationalsozialistischen, politischen und weltanschaulichen Umbruchs in Deutschland...”)

# Perverted eugenics: An exhibition in Vienna

*Michael 2006;3:24–27*

## **The formal background**

On the 18<sup>th</sup> of August in 1939 a circular was issued in the ministry of the interior in Berlin, stating that reports should be submitted on children suffering from the following diseases: Idiocy, mongolism, microcephaly, hydrocephalus, deformities and paralyses.

The children had to be examined, and by this assessment of the diagnosis, the two main questions were a) if this was a hereditary condition, and b) to what extent the patient was likely to be able to contribute to the society when grown up.

However, considerations also were made as to the need of future care. Therefore, a lot of children with acquired or unclear diseases also were included and reported on.

The subsequent diagnosis given by the doctor could mean life or death for the patient.

## **“Am Steinhof” in Vienna**

In the outskirts of the Austrian capital, on a beautiful hill in the 14<sup>th</sup> district of Vienna, the large hospital complex “Am Steinhof” was erected in 1907 to take care of patients with psychiatric and neurological diseases. Its architecture, especially the church, has made it an attraction and a showpiece for the Viennese *art nouveau* style, the *Jugendstil*.

However, this institution which since 2000 carries the name “Otto-Wagner-Spital”, has a grim history. This was one of the places where the eugenic principles of the Third Reich were mercilessly carried out during the years 1940-1945.

Not only were children killed based on their diagnoses, but they were also exposed to medical experiments where waiting for the following post mortem examinations played an important part.



*The entrance to the "Otto-Wagner-Spital" 2005. (Photo: Ø. Larsen)*

The activities must have been perceived as potentially insulting even to the prevalent ethics of the NS-era, as the institution was surrounded with secrecy, and a practice of giving out false or misleading information was part of the system.

When the war was over, the clinic was immediately closed. Documentary material had to a large extent been destroyed, but enough had been preserved to bring the responsible persons to court. The leader, dr. Ernst Illing, was executed and the others also got hard sentences.



*The exhibition in the Vienna City Archive. (Photo: Ø. Larsen 2005)*

### **The patient records**

For some reason many of the patient records have been saved, perhaps because they were intended to serve as background material for later studies on the pathological preparations from the victims. Probably, 789 children died between September 1940 and April 1945. Records which had been stowed away have been discovered over the years, the last ones in 2003, so that documentation for 561 dead children, and for 505 surviving girls and 506 surviving boys now have been transferred to the Vienna City Archive, as a consequence of a new archive legislation, passed in 2000.

Of course this material provides information of scientific interest for historians of all kinds, but it has even now, more than half a century later, legal importance. Besides that, the material has a human side, as it gives information to those who still are wondering about the fate of family members who had died in this closed institution during the war.

### **The exhibition**

In 2005, the City Archive of Vienna arranged an exhibition where items from the record collection were on display. Names and portraits of the deceased patients were impressing as testimonies of the cruelty, but far more the samples of drawings and writings by some of the children, showing to





*In the park of "Otto-Wagner-Spital" a memorial has been erected, commemorating each of the children who lost their lives. (The euthanasia department was named "Am Spiegelgrund" in 1942. Photo: Ø. Larsen 2005.)*

all that their condition could not have been that bad and have legitimated euthanasia by any ethical standards.

Medicine of the Nazi-years has been covered by a series of publications. To the exhibition, the City Archive published a pamphlet, a sort of catalogue which describes the history of the wartime euthanasia project in Vienna (1), and also contains a list of works for further reading.

### **Literature:**

Rigele B. Kindereuthanasie in Wien 1940-1945 – Krankengeschichten als Zeugen. Wien: Wiener Stadt- und Landesarchiv, 2005. 28pp. ISBN 3-902069-98-8.

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## The development of nutrition policy in Canada in the 1920s

*Michael* 2006;3:28–46.

### **Summary:**

*In the 1920s in Canada, the Federal Government's Division of Child Welfare issued the nation's first dietary guidelines aimed at encouraging women to breastfeed and also, somewhat ambivalently, encouraging women to feed cow's milk to babies over nine months of age. The early 1920s was a time of transition in milk processing and distribution. Some cities and provinces had strong sanitary hygiene laws to ensure that milk was free of disease and contamination but others did not, so that general national guidelines promoting the use of cow's milk were problematic.*

*These guidelines were promulgated at a time when many public health officials had begun to shift from vilifying milk, because of its potential to harbour dirt and bacteria and because of its well known links to infant mortality, to extolling its virtues because of its newly discovered rich vitamin and mineral content. The shift in milk's status as an unhealthy liquid to the quintessential protective food for children, both in the public's mind and in the mind of many public health practitioners, particularly those from cities that had managed to clean up their milk supply, was rapid and occurred while much the nation's milk supply was in fact not safe. The promulgation of dietary guidelines promoting the consumption of cow's milk for babies over nine months at this time was inconsistent and likely quite dangerous, particularly as Canada during the 1920s had the highest infant mortality rates in among industrialized nations.*

*The guideline was issued at a time of scientific enthusiasm over the new value of milk in protecting against under-nutrition and promoting optimal health. The dairy industry and the Federal Department of Agriculture unabashedly promoted the protective benefits of milk in large national campaigns overwhelming the ability of the Division of Child Welfare to deliver the best possible dietary guidelines for the times.*

*The relatively weak guidelines developed by the Division in the 1920s demonstrates how, in the absence of a strong nutrition policy centre, inappropriate and perhaps unhealthy nutrition advice was too easily modified by the dairy industry and its representative in the federal government, the Department of Agriculture.*

## **Introduction**

In 1921 the Division of Child Welfare in the Federal Department of Health developed Canada's first national dietary guidelines in an attempt to improve breastfeeding habits and encourage mothers to feed their babies more cow's milk (Canadian Mothers Handbook, 1923). These dietary guidelines were developed primarily to reduce infant mortality rates and, not surprisingly, given the well known contribution of milk to these persistently high rates, the guidelines were ambivalent in their advice about the consumption of cows' milk.

The Division of Child Welfare's guidelines were developed during a transition time in the history of milk as it emerged from its long held status as a food easily contaminated and a dangerous carrier of diseases of infancy and childhood to its new status as the premier protective food for children containing life enhancing vitamins and minerals (Dupuis, 2002). This transition occurred during the 1920s in a Canada covered with a patchwork system of municipal and provincial sanitary hygiene laws so that milk was clean and disease free in some cities and in some regions but not in others (Davidson, 1949; Curan, 1954; MacDougall, 1990). It was also a time of transition for the dairy industry which, in the face of declining dairy exports and domestic milk consumption, turned increasingly to public health professionals and nutritionists to increase sales, in particular of fluid milk by changing the status of milk from an unhealthy to a healthy food.

The breastfeeding guidelines developed by the Division of Child Welfare were widely disseminated to the general public in the inter-war years with the publication of the highly popular Canadian Mother's Books (Canadian Mothers Handbook, 1923). Paradoxically, wide dissemination of this advice occurred as breastfeeding in Canada, and the most of the rest of the developed world, began an historic and profound fifty year decline which was only reversed in the late 1960s (Myers, 1981). This occurred as the medical profession in Canada consolidated control over medical practice and as it increased its oversight over pregnancy and birthing, in part because of growing public concerns over sustained high maternal mortality rates during the inter-war years (Kerr, 1935; Coburn et al, 1981).

A study of the Division's guidelines and the circumstances of their introduction and widespread dissemination provide insight into what was the first nation-wide attempt at nutrition policy making in Canada and elucidates the complex interplay of health beliefs, public health, economics, and politics in developing Canada's first nationally promulgated dietary guideline.

The general purpose of this paper is to describe Canada's first foray into the development of national dietary guidelines. Besides this purely descriptive task the paper seeks to elucidate and explain the interplay of economics, science, and public health that shaped these early dietary guidelines and extract lessons that may be relevant to nutrition policy making today.

### **Breastfeeding and doctors in Canada in the 1920s**

There is a long history of artificial feeding from ancient times up to the development of modern public health legislation, which shows that this form of feeding, in unsanitary conditions, generally meant death for an infant (Baumslag and Michels, 1993; Fildes, 1986; Stuart-Macadam and Detwiler, 1995). Artificial feeding of infants in cities undergoing the transformation of an industrial revolution, such as occurred in Canada towards the end of the 19<sup>th</sup> century and in the early 20<sup>th</sup> century, was a dangerous practice as it brought babies into direct contact with contaminated, often germ ridden, water and cow's milk (Ward and Ward, 1984).

There is some evidence, particularly in North American cities, where wet nursing was not as popular as in Europe that the rate of artificial feeding among poor women increased quickly in the late 19<sup>th</sup> century (Fildes, 1998). It is likely that poor urban women in the difficult working conditions of the time may have had particular difficulty in sustaining breastfeeding. At the same time, these poor women would have faced unsanitary living and difficult working conditions and, if they used artificial feeding, access mainly to contaminated water and milk for their babies (Ward and Ward, 1984).

Public health reformers were well aware of this in the late 19<sup>th</sup> century. In Britain the scientific links between poverty, increased artificial feeding, and infant mortality were established by the turn of the century. In a classic study of infant mortality among the poor conducted in London at the turn of the century, Newman (1906) concluded that "a mother suckling her infant requires nourishment, and it is lack of nourished mothers among the poor- many of whom are half-starved- that leads to the inability to provide milk for their offspring. This, in its turn, leads to early weaning, which involves artificial feeding, which is one of the most difficult undertakings in

the tenement homes of the poor. And so it comes about that the early-weaned infant is so often marked for death in infancy.” (Newman, 1906, p.260).

The links between artificial infant feeding and infant mortality were also well known in Canada (MacMurchy, 1923). The industrial revolution and concomitant social upheavals underway in Canada in the 1880s and 1890s provoked increasing pressure for social reform spearheaded by organizations such as the National Council of Women, the Women’s Christian Temperance Union, and the Social Service Council of Canada. These and resulted in the establishment of milk depots in some Canadian cities and Child and Maternal Hygiene Divisions in many municipal public health departments which educated women to breast feed their infants (Allen, 1971; Moscovitch and Drover, 1987; Valverde, 1991).

The social reform movement in Canada achieved much by World War One, including the development of public health legislation in many provinces and municipalities, and, at the federal level, created the political pressure to establish a national department of health including a Division of Child Welfare. However, by War’s end this movement was largely spent as a social force for change (McCuaig, 1980). The 1920s was a time of growing public faith and belief in the power of science in general and increased respect for the achievements of medicine in particular as the medical profession became increasingly better trained, better able to effect cures, and as the profession grew in stature and organizational power (Coburn et al, 1981).

However, many in the medical profession did not view breastfeeding in a positive light. For example, in the earliest Canadian medical investigation of breastfeeding among 370 children attending the Nutritional Clinic at Toronto’s Hospital for Sick Children investigators claimed that malnutrition cases were to be found in equal proportion among breast fed and bottle fed babies (Macdougall, 1922). According to the investigator, the cause of malnutrition in approximately half these cases was due to mismanagement and “lack of discipline in the home”. In particular, “the first evidence of lack of home control is the fact that the child nurses 15 to 18 months. When the parent fails to control a child of that age, what success need one expect in dealing with this same child at 10 years of age?” (Macdougall, 1922, p. 28).

This early medical study of breastfeeding illustrates the distrust the Canadian medical profession displayed towards mothers in general and breastfeeding in particular. The medical profession gained more control over the process of pregnancy and birthing in Canada in the period from

1920 to 1950. For example, by 1939, 41% of women birthed in hospitals increasing to 67% in 1949 (Burns, 1967). During this time, the advice dispensed by doctors to women increasingly promoted artificial feeding and diminished the importance of breast feeding.

As Myers as shown, during the 1920s middle class women moved away from breast feeding for many reasons. For middle class women, increasing public faith in science and therefore the science-based feeding increasingly promoted by doctors, and the need for more independence for middle class women made artificial feeding more appealing (Myers, 1981). Thus, at the very time when national nutrition guidelines were developed and widely disseminated to promote breastfeeding, new medical and social conditions were leading to a profound decline in breastfeeding and increased exposure of very young infants to cows' milk.

### **The availability of disease free cow's milk in Canada in the 1920s**

During the latter quarter of the 19<sup>th</sup> century and the first two decades of the 20<sup>th</sup> century, rapid industrialization and consequent separation of farm from the urban table, stretched the primitive storage and distribution systems of the day rendering milk an even greater hazard for poor urban children than it had ever been on the farm (Cohen and Heimlich, 1998). Milk had to be transported long distances and stored for relatively long times in the absence of refrigeration and it was often obtained from tuberculosis infested cattle living on un-inspected farms and unsanitary dairy barns (Dormandy, 2000).

This began to change in Canada, beginning in Toronto, which passed laws as early as the 1880s to regulate the dairy barns within the city (MacDougall, 1990). By 1908 Ottawa passed stringent by-laws requiring the inspection of all cattle supplying milk to the city in an attempt to extend its dairy inspection regime to its rural milk shed (Hollingsworth, 1922). Toronto passed similar laws at this time and with growing pressure, in 1911, Ontario passed its Milk Act mandating the inspection of herds and dairy facilities province wide. In 1914, in a further effort to clean the milk supply, Toronto city council passed legislation making pasteurization of all milk sold in the city compulsory so that by the early 1920s milk in Toronto was probably safe (MacDougall, 1990).

The first state-level legislation in North America making pasteurization of milk compulsory was passed in Ontario (as amendment to the Public Health Act) only in 1938. During the 1920s and 1930s only "fifty municipalities of the eight hundred in the province had passed by-laws requiring the pasteurization of all milk offered for sale" (McHenry, 1941). As late as

1922, the head of the National Dairy Council of Canada told a meeting of the Canadian Public Health Association that, “milk sold in Ontario for domestic consumption (that is outside of our larger cities), is disgusting, dirty and dangerous” (Stonehouse, 1922a, p.298). In an article in the Public Health Journal he warned that the Council required continuing education of farmers, milk processors and distributors, and greater inter-cooperation between producers and medical officers of health to maintain current standards and further improve the cleanliness of milk (Stonehouse, 1922b).

Even in Canada’s most activist public health province through the 1920s and 1930s the milk supply was uneven in its cleanliness. And, outside Ontario, provincial legislation and most municipal by-laws were not as advanced. For example, in Canada’s largest city (at the time) Montreal, milk was not safe as evidenced by continuing milk-borne typhoid epidemics through the 1920s (MacDougall, 1990).

Thus, in spite of better legislation in some regions, greater awareness within the milk industry, more inspection of cattle and dairy facilities, and greater acceptance and availability of pasteurized milk, much of the Canadian milk supply was unclean and potentially dangerous during the 1920s and 1930s.

### **Reforming milk’s image**

While most public health professionals had spent the last quarter of the 19<sup>th</sup> century vilifying milk and warning the public of its dangers by the early 1920s, at least in cities where the milk supply had been cleaned up, these same professionals began to extol the virtues of milk. Why this about face?

This came about mainly because of the discovery that besides fats, protein, and carbohydrates, vitamins and trace minerals also were necessary to sustain life. These discoveries came quickly between the turn of the century and the early 1920s (Nestle, 2002). Foods rich in vitamins were dubbed “protective” and milk was quickly identified as the most ideal protective food because of its high energy, mineral, and vitamin content (Valverde, 1991).

As well, milk had a special place in early vitamin research. When researchers broke food down into protein, fat, and carbohydrate and fed these constituents in pure form to baby animals they died. But, when fed milk these animals thrived. They used milk as they knew that as nature’s food for young animals it contained all the elements necessary for life. And, it was, in many cases, from milk that these researchers had isolated the first vitamins (Rosen, 1958).

The publicity around these early vitamin studies was enormous. The role of milk in these experiments was as also well publicized and provided milk with a new image. Following the vitamin discoveries public health professionals were divided about the impact of pasteurization of cows' milk as some felt this would denature the vitamins negating milk's positive impact on health (Hollingsworth, 1922). Once, it was discovered that pasteurization only minimally affected vitamin content public health professionals realized that combined municipal regimes of farm and dairy inspection and pasteurization would make milk safe and once safe, an ideal protective food.

Thus the early 1920s was a transition time for milk. On the one hand, because of the uneven cleanliness across the milk supply it was still dangerous but, on the other hand, it was becoming quickly known as the ideal protective food, particularly for children. In order to understand how Canadian health authorities in the 1920s developed guidelines based on feeding cow's milk to babies, children, and pregnant women it is necessary to consider the position and the needs of the dairy industry at this time as the 1920s was also a time of transition for this industry as it faced new challenges.

### **The relationship between the federal government, the dairy industry, and public health officials in the 1920s**

In the last quarter of the 19<sup>th</sup> and first quarter of the 20<sup>th</sup> century the dairy industry in Canada was overwhelmingly concentrated in the provinces of Ontario and Quebec. The factory system of cheese production, developed in nearby New York State in 1850, had made its way to Canada by the early 1860s and by the late 1860s there were over 235 cheese factories in the province of Ontario alone (Fowke, 1947). By the 1880s Ontario and Quebec had developed a sophisticated export oriented cheese and butter factory system with most exports destined for the British market.

The development of cheese factories and creameries was encouraged by the federal Department of Agriculture through the office of the federal Dairy Commissioner established in 1890 (Fowke, 1947). During the last decade of the 19<sup>th</sup> century experimental agricultural stations were established across Canada to teach farmers and entrepreneurs the business of factory cheese and butter production. Through these experimental stations the department of Agriculture subsidized the construction of local factories and the training of personnel. Once these demonstration projects were established the department would withdraw allowing local businessmen to finance further operation and expansion<sup>1</sup>. As well, in the 1890s as refrigera-



tion systems developed, and became a key to the expansion of the export market for dairy products, the department of Agriculture actively subsidized the development of refrigeration storage facilities at key export ports (Britnell and Fowke, 1962).

By the turn of the century Ontario and Quebec had a sophisticated dairy industry (actively supported by the federal government) based on exporting cheese and butter mainly to Britain. Exports of cheese and butter peaked in the first decade of the 20th century and dropped thereafter as local populations expanded and farmers shifted from cheese to fluid milk production to meet this local increase in demand and as Canadian dairy exports in the British market faced increasingly stiff competition from New Zealand, Australia, and Denmark (Skogstad, 1987).

In Canada prior to the First World War the dairy industry remained remarkably un-concentrated. Fluid milk and butter production was mainly based on single family farms and while cheese production, with its need for factory facilities, required more capital, it also remained relatively un-concentrated. Concentration in the fluid milk distribution business varied by region and city. For example, in the year preceding the First World War the cities of Ottawa and Regina were served by one large distributor whereas Toronto had over 50 distributors (Report of the Milk Committee, 1917).

In 1917 towards the end of World War One, the federal government passed the War Measures Act and created a centralized Food Control system. In an effort to increase the efficiency of milk production and distribution on the home front, the Food Controller formed a Milk Committee which recommends consolidating the dairy industry, particularly its milk distribution component. The committee felt that fewer producers, suppliers, and distributors, would increase the economic efficiency of the system, ensuring that farmers obtained better prices and therefore better incentives to produce, and that the reduced number of distributors and producers

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<sup>1</sup> It should be noted that the Canadian experimental agricultural stations had a purely agricultural purpose unlike the stations established by Atwater in the United States during this same era (Aronson, 1982). In the last decade of the 19<sup>th</sup> century, Atwater firmly linked the emerging science of nutrition with the problems of efficient labour supply and labour harmony in the rapidly industrializing conditions of America at the time and used agricultural stations established by the USDA to pioneer the new nutrition science (Aronson, 1982). Conditions in Canada were very different at this time. Canada was a small nation, with a small economy and, relative to the United States, an immature industrial infrastructure. In Canada the science of nutrition remained, relative to the United States and Europe, under developed and under appreciated. As an example, in Canada it was only in the late 1930s that the first scientific dietary surveys were conducted whereas the first surveys in the USA were conducted in 1885 (Pett, 1944).

would make it easier to organize effective systems of public health milk inspection.

While calling for increased consolidation in the milk industry, the federal Department of Agriculture spearheaded an increased drive for agricultural production specifically for export under the slogan “Patriotism, Production, and Prosperity” resulting in greatly expanded dairy capacity which peaked just as the war ended and export markets for dairy products dried up (Britnell and Fowke, 1962, p.48). The abrupt shift to dependence on domestic consumption of milk, butter, and cheese, at the end of the war, during a time of growing food price inflation, which restricted the ability of domestic consumers to purchase dairy products put the dairy industry into crisis <sup>2</sup>. The price of milk increased from 8.8 cents in 1914 to a high of 15 cents a quart in 1920 and for the duration of the decade hovered at 12 cents, approximately 40 percent higher than it had been at the beginning of the War (Dominion Bureau of Statistics Report, 1960) (Figure 1).

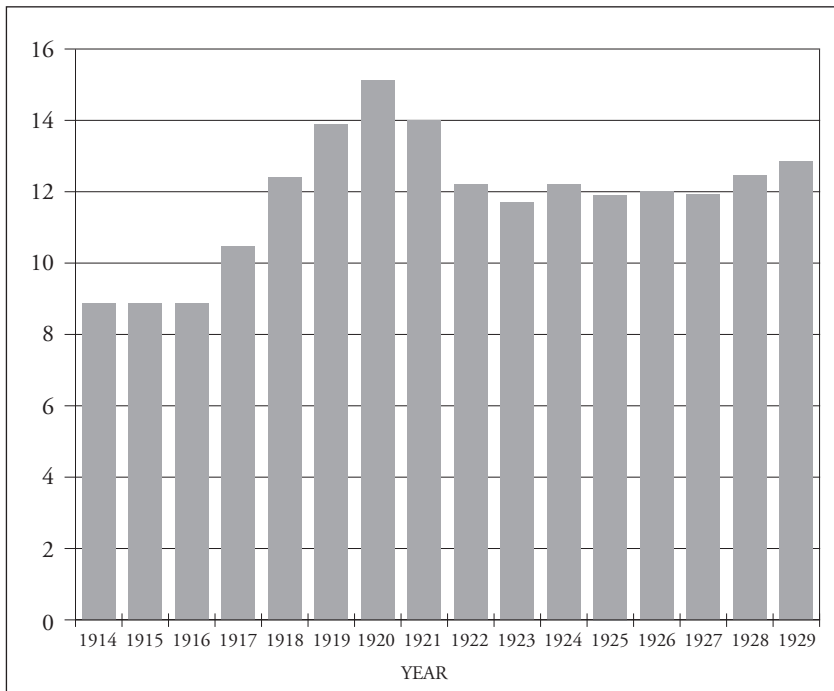


Figure 1: Fluid milk prices in Canada, 1914 to 1929 (cents per quarts).

<sup>2</sup> Dupuis (2002, p.114) has shown that in the United States the dairy industry faced similar pressures at the end of World War One.

The Food Controller's Milk Committee reported that, "any slight increase in the price of milk, unfortunately, has been followed by a largely decreased consumption" (Report of the Milk Committee, 1917, p.6.). Milk consumption was clearly very sensitive to reductions in disposable income. Given the inflationary conditions at that time, the committee recommended that "a campaign of education be undertaken, emphasizing the relatively high food value of milk and the many ways of using it. Such a campaign could, perhaps, best be carried out by teachers of Domestic Science and by home economics Associations" (Report of the Milk Committee, 1917, p.6.).

This committee and the dairy industry clearly realized that the price elasticity for milk might be reduced if milk's image could be reformed. The authors of this report understood that enhancing milk's image would take more than a public relations campaign and suggested that the industry work more cooperatively with public health professionals to clean the milk supply.

The process of making milk supplies safe had often involved conflict between dairy farmers, processors, and distributors and municipal public health officers as the latter battled to regulate and to convince the industry of the dangers of dirty milk in spreading disease (Hollingsworth, 1922). The process of educating farmers, processors, and distributors and of cajoling industry into safer practices involved compromise as well as conflict, both within the industry and between public health and industry officials, so that in many cities by the end of the second decade of the 20<sup>th</sup> century, public health professionals and the dairy industry had a long history of working with each other.

For the first time in the history of the urban sanitary reform movement public health professionals began to recommend clean and inspected milk as the ideal protective food. As early as 1917, as shown by the report to Canada's Food Controller, the dairy industry also began to campaign harder amongst its producers, processors, and distributors to improve the cleanliness of the milk supply and harness their relationship with public health officials, nutritionists, and dieticians to promote the protective benefits of milk to children.

An early example of this occurred in Toronto in 1922 in an extremely well publicized joint campaign by the Canadian Public Health Association, the Child Welfare Council, and the National Dairy Council of Canada. These groups sponsored Milk Week specifically targeting school children and their mothers to promote increased consumption of milk (Department of Pensions and National Health, 1923). The thrust of the campaign was

that milk was vitamin and mineral rich with special protective effects on children's health. The message was spread round the city by politicians, public health and National Dairy Council officials with speeches, carnivals in local parks, and parades so that it had an extensive reach.

As well, in 1923 officials from the Federal Department of Agriculture established strong alliances with the Federal Division of Child Welfare and national child welfare and women's groups organizing several nutrition-based campaigns to increase the "use of milk for children and mothers" (Department of Pensions and National Health, 1923, p. 42). In 1926 the Federal Department of Agriculture's, Milk Utilization Branch instituted a milk consumption promotion policy "cooperating with public health nurses and child welfare workers; assisting in provincial schemes, addressing dairy conventions meetings of school teachers and also public, collegiate and normal school classes". No opportunity is lost for disseminating information as to the dietary value of milk and its products." (Department of Agriculture, 1926, p. 34). The Milk Utilization Service was engaged in "the work of increasing the consumption of dairy products by arousing public interest in their nutritional value" (Department of Agriculture, 1926, p. 86). By the late 1920s dieticians were "employed in this work, had booths for demonstration purposes at the leading exhibitions, attended meetings of health and child welfare organizations, women's institutes, dairy conventions and other similar gatherings." (Department of Agriculture, 1927, p. 40).

Although, particularly early in the 1920s, the cleanliness of the Canadian milk supply was uneven, public health professionals, the dairy industry, and the Federal Department of Agriculture increasingly joined forces to promote increased consumption of milk among children. For public health professionals working in cities with clean milk, given the recent discoveries of the vitamin and mineral content of the liquid (and at least 35 years before any hint of a pejorative association between the fat content of milk and ill health), this 360 degree change in attitude towards milk made good health sense. For the dairy industry, given decreasing milk consumption following the war, the emerging protective status for milk by the early 1920s was a marketing opportunity. However, as will be shown in the next section, for public health professionals attempting to generate nation wide dietary advice directed primarily at reducing infant mortality, the legacy from milk's past was not so easy to jettison.

### **The division of child welfare and Canada's first dietary guidelines**

The Division of Child Welfare was formed in 1919 within the Federal Department of Health just one year after it was formed. The mandate of the division was to reduce the persistently high infant mortality rate in Canada (Schnell, 1987). In 1921 the infant mortality rate was 102.1 deaths per 1,000 live births. By 1929 the infant mortality rate was 92.9 per 1,000 live births, a reduction of approximately 10% through the 1920s (Statistics Canada, 1991). This reduction was very small and the Federal Department of Health was also aware that rates, at that time and well into the 1940s, in Canada were the worst in the industrialized world noting that in 1921 the infant mortality rate in Canada was more than double that in New Zealand, which had the lowest rates among developed nations (Department of Pensions and National Health, 1924).

The gravity of this situation and the well accepted links between malnutrition, artificial feeding with cow's milk, and infant mortality as well as the new information on the protective value of milk figured strongly in the Division's first national dietary guideline directed to expectant and new mothers. These guidelines were first published by the Division in 1921 in the Canadian Mothers Book (CMB), in both English and French and disseminated widely across Canada through the 1920s (Department of Pensions and National Health, 1923).

The CMB reflected an ambivalence about milk as it gave general advice to pregnant women to use it as a protective food but, in its specific diets never actually instructed pregnant women to drink milk. And, the CMB issued dire warnings to mothers against the feeding of cow's milk to babies less than nine months of age and strongly advocated breastfeeding for the mother as "she knows her nursing is the greatest safeguard for the baby's life. She knows that her milk will not only nourish him but protect him from many of the diseases of infancy. She does not want her baby to die. Nursing the baby is the easiest way. No formula with bottles and rubber nipples, and measuring spoons and milk-sugar and sterilizing, and no one knows what else, for the Canadian Mother. These things will get dirty and dirt in milk is death to the baby." (Canadian Mothers, Handbook, 1923, p. 72).

In fact the CMB advised mothers to drink cow's milk only after her baby was born. The CMB advised women to "keep on the same diet that suited you before the baby came but drink a great deal more- say a pint or more of milk a day and plenty of water three or four times a day. You should have meat at one meal every day. Milk is our greatest protective food. You must have it." (Canadian Mothers Handbook, 1923, p. 82).

Thus, new mothers were specifically advised to drink milk but pregnant women were not.

After clearly warning Canadian mothers away from feeding milk to babies less than 9 months of age the CMB described the role of cow's milk in the diet of children once they attained 9 months as follows: "Milk is the indispensable food for children. They cannot do without it. The cow has been well called the "the foster mother of the human race." Little children must have milk to enable them to grow properly. No matter what it costs, milk is still the cheapest food for children. Children from nine months to two years should have about two pints of milk every day in addition to other food, and it is really a mistake to give them any less till they are about twelve years of age. Three large cups of milk a day is the very least they should have" (Canadian Mothers Handbook, p. 107).

The CMB graphically and repeatedly advised that milk for babies over 9 months of age should be dirt free, pasteurized and stored properly, reflecting the extreme unease that professionals in the Division of Child Welfare felt, in the early 1920s, about the safety of the milk supply.

In speaking of the situation in the United States around the same time, Apple stated that "it is likely that the rising standard of living, greater access to medical care, and improved food and water supplies in the United States in the first half of this century at least in part masked the negative effects of the growing utilization of artificial infant feeding" (Apple, 1987, p. 172). Infants and children of women, particularly poor women, were vulnerable at a time when their mothers were moving away from the practice of breastfeeding under conditions of unavailability or sporadic availability of clean milk and water, and before the era of rapidly rising standards of living and widespread availability medical care.

The guidelines developed in the Canadian Mother's Book, the first guidelines developed in Canada for nationwide dissemination, contained a stark inconsistency on the one hand promoting cow's milk as "the" protective food and on the other hand, warning strongly that if used inappropriately it would kill the baby. This message, promulgated given the uneven availability of clean milk in the early 1920s in Canada, may have been more than inconsistent - it was likely quite dangerous.

Throughout the 1920s Canada had the highest rate of infant mortality among industrialized nations (Schnell, 1987; Statistics Canada, 1991, Department of Pensions and National Health, 1924). The rate of infant mortality did not begin a steady decline until the early 1930s. It is quite likely that a considerable portion of this mortality during the 1920s was due to continued ingestion of unclean milk during artificial feeding. It is likely

that the cow's milk promotion component of the CMB's dietary guideline was unhelpful in this situation.

The guideline was issued at a time of scientific enthusiasm over the new value of milk in protecting against under-nutrition and promoting optimal health. The public's enthusiasm for the new nutrition science, coupled with local public health promotion campaigns with clean milk, and the unabashed promotion of the protective benefits of milk by industry and Department of Agriculture officials, overwhelmed the ability of the Division of Child Welfare to deliver the best possible dietary guidelines for the times.

With the luxury of hindsight, the best possible dietary guideline for the times would have given very little or no attention to cow's milk or continued the older public health stance towards milk, which was overtly negative, and promoted a longer period of breastfeeding, followed by a long transition from breastfeeding to solid food. Instead of developing such a guideline, the Division of Child Welfare, did, presumably what it could, given the political pressures it was under, ending up with a compromise - with which it was clearly uncomfortable - which was probably not in the best health interests of mothers and children in Canada at the time.

### **Lessons for nutrition policy making today**

This paper demonstrates how, in the absence of a strong nutrition "centre" in the federal government (the Division of Child Welfare was formed only in 1919 and was entirely shut down during the middle of the 1930s), what Cannon and Nestle call "eat less" nutrition advice, implied in the Division's breastfeeding guidelines, was too easily modified by the dairy industry and its representative in the federal government, the Department of Agriculture (Nestle, 2002; Cannon, 1987).

The federal department of agriculture has figured large in Canada's history in part because the overarching objective of Canadian national policy in the 19<sup>th</sup> and early 20<sup>th</sup> century was to build a strong agricultural sector, particularly in the west where prior to the building of the transcontinental railway in the 1880s, the Canadian government was concerned with the threat of American expansion into the Western provinces. The thrust of agricultural policy after building the railroad was to settle the Prairie provinces and create a Western Canadian economy on a strong agricultural foundation while at the same time strengthening the mixed and dairy farming economy of central Canada (Anderson, 1966/67).

Expansion of livestock production and the dairy industry was a key to this policy which was threatened by milk surpluses and the shutting off of

export markets for dairy products in the aftermath of World War One. In the early 1920s the objectives both of the dairy industry and national food policy makers in the department of Agriculture shifted to active promotion to increase the domestic consumption of fluid milk.

The new science of nutrition with its enthusiastic espousal of milk as the quintessential protective food was harnessed by these interests and new alliances made with public health professionals to garner their support to market milk, particularly to children. The nutrition professionals beginning to emerge from agricultural and home economics programs in the 1920s were employed by the federal department of Agriculture and the dairy industry to utilize the new science to promote increased milk consumption<sup>3</sup>.

The alliance of agricultural interests and their successful harnessing of the new science of nutrition in the 1920s were so effective that they were able to market milk to children even in the face of clear evidence of high infant mortality rates which had been scientifically linked to the ingestion of unclean milk, in the absence of effective provincial public health legislation regulating the milk supply and, even though the price of milk was at historically high levels.

Within the federal government the only resistance to this enthusiastic food policy came from the Division of Child Welfare in the form of the nations first dietary guidelines warning mothers not to feed cow's milk to babies less than 9 months of age. This resistance was half-hearted perhaps because the Division itself was also actively involved with the Milk Utilization program within the Department of Agriculture which specifically and aggressively promoted milk consumption among mothers and school children throughout the 1920s and 1930s.

Even as nutrition policy was emerging as a tool to fight the extremely high infant mortality rates of the 1920s it was overwhelmed by the already strong alliances formed between the federal Department of Agriculture and the dairy industry. Public attitudes about scientific progress, the promise of the new nutrition science, the needs of the increasingly powerful medical profession, and industrial and national interests promoting milk consumption dovetailed to overwhelm efforts to retard the promotion of milk to children and infants.

This historical study has relevance today. First, experts in the Division of Child Welfare promoted an indirect "eat less" message (at least for in-

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<sup>3</sup> Nestle (2002) has demonstrated the same phenomenon in the United States around this time.



fants under 9 months of age) which would have acted to reduce the consumption of fluid milk (Nestle, 2002; Cannon, 1987). At the same time the Division was promoting milk consumption with its sister department, Agriculture in an alliance in which it was very much a weaker, junior partner so that nutrition policy was subordinate to food policy.

Second, this Division of Child Welfare's nutrition message was promulgated with unequivocal evidence about the harm to health posed by drinking unclean cow's milk. In other words, the evidence of harm was firm and uncontested. However, this secure scientific evidence was swept aside because of exciting new scientific developments attending the discovery of vitamins and because many of those in the public health community who had been involved in gathering and promoting the evidence of harm from unclean cows milk switched, as the milk supply became cleaner, to enthusiastic support for the new virtues of milk.

Today, nutrition policy makers are faced with the relatively new science of genetics which may be poised in similar fashion to overwhelm the more cautionary messages from the science of environmentalists and nutritionists opposed to genetic manipulation of the food supply. Health Canada has strong relationships with industry which could compromise its ability to generate nutrition advice which is contrary to industry interests. And, the move to harmonize nutrition standards with the United States, which has gained momentum over the past decade, will further restrict the independence of nutrition policy making in Canada in the near future and likely make Canadian nutrition policy more dependent on the needs of American food policy.

The switch in the 1920s from public health science's vilification of cow's milk to a position extolling its virtues cemented the alliance between the dairy industry and the federal government and shifted public attitudes towards milk. A key issue in today's nutrition policy making environment will be the role which science, scientists, and scientific evidence plays in the nutrition policy making arena. Will the new science of genetics closely aligned, as was the vitamin science of the 1920s, with agriculture and agribusiness, similarly overwhelm the nutrition and health concerns of our time?

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## Book review

# European social protection -systems in perspective

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The Compostela Group is one of many broad university networks, set up to further develop university cooperation in Europe. This group was initiated in the Compostela Holy Year of 1993 by the University of Santiago de Compostela in Spain, with the aim of establishing a university network to preserve the historical and cultural heritage around the pilgrimage roads across Europe to Santiago de Compostela. The network has gradually expanded and now consists of almost 80 European universities. The scope of the work in the group is wide, encompassing many aspects of research and higher education. The European Union participates in financing some of the activities in the group.

This rather brief text (130 pages) is one of the publications in the Group's series "European Issues", and is one of the results of the Socrates/Erasmus project "Phoenix: Thematic Network on Health and Social Welfare Policy", approved by the European Commission in 2001. Contributions came from five meetings, from 1994 to 2000, assembling researchers from various nationalities and disciplines.

The author gives an interesting outline of the development of welfare systems and welfare states in Europe, outlining the differences in underlying philosophy, scope and approach among groups of European countries. As the term Social Protection in the title implies, the emphasis is on social benefits, as well as on comparative data on measures against poverty, unemployment and exclusion. Financing and organization of health services and health care are touched upon but not dealt with in depth. Nevertheless, to a reader with a public health background one reflection is that this is yet another pub-

lication which labels and describes health services as part of the social services, not as in my opinion as an independent main sector of society in line with and in cooperation with social services and social security systems.

The data provided extend up to the late 1990s. Recent years have shown a trend towards restrictions in the role of the state, reduction in the levels of social protection and increases in the proportion of health expenses paid by patients. Towards the end of the 1990s such signs of a weakening of the welfare state appeared in many European countries in recent years, whether with conservatives or socialists/social democrats in political power. The book briefly outlines this development, but detailed and up-to-date information on this development must be sought elsewhere.

The rapid changes in financing and organization of health and social services of the welfare state seen in many countries in recent years illustrate politicians' beliefs or hopes that such measures might solve problems of budget restrictions and increased demand. This publication outlines the historical background and as such it will be of interest and be useful to politicians, administrators and researchers.

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