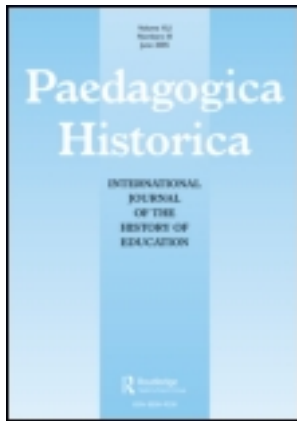


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Ideologies, Gender and School Policy: a Comparative Study of Two Swiss Regions (1860–1930)

Anne-Françoise Praz

Switzerland provides an interesting case study for the development of educational policies. As a result of federalism, each state – called a canton – worked out its own school system in relative independence. How can various political and religious environments generate different educational systems according to gender? Which factors promote or hamper gender equality in school policy and equal parental investment in girls' and boys' education? This paper proposes a comparative study of two Swiss cantons, one Protestant and progressive, the other Catholic and conservative, between 1860 and 1930. Drawing on both qualitative and quantitative methods, a multilevel analysis is conducted. Cantonal ideologies and visions regarding gender and education emerge from the content analysis of educational periodicals and school manuals; administrative and legislative sources allow us to follow the school policy and its implementation down to the local level; and the impact of these discourses and policies on parental investment in boys' and girls' education is measured through a multivariate statistical analysis of the educational career of about 2300 children, living in four villages that experienced the same economic conditions. The results provide a striking evidence of the greater discrimination against girls in Catholic culture.

Introducing women into history fills gaps in historical knowledge but using gender as a basic explanatory variable allows us to question and even to renew explanatory designs. Women's history has indeed opened new research fields in the history of education, focusing on women educationists or women's educational institutes, on segregation and discrimination against women and, last but not least, on the way women challenged the boundaries of educational systems to acquire and diffuse learning.¹ More than being an additional historical field, gender history actually puts forward a new tool to analyse the development of educational systems and policies. Research on how a society copes with the social issue of gender in education, and how it structures the sexual division of knowledge, provides interesting insights into what

¹ For Switzerland: Head-König, Anne-Lise, and Liliane Mottu-Weber. *Femmes et discrimination en Suisse: le poids de l'histoire – XVI^e – début XX^e siècle – Droit, éducation, économie, justice*. Genève: Publication du Département d'histoire économique, 1999.

is at stake in access to education, in investment in human capital, under various economic constraints and dominant ideologies.²

Switzerland provides, in this respect, an interesting case study for the development of various educational systems and school policies. Four languages, two religions, limited communication between linguistic groups and long historical antagonism between Catholics and Protestants reduced the cultural and religious contacts and thus upheld heterogeneity well into the twentieth century. The political structure, based on strong federalism, gives to the governments of the provinces – called cantons – important powers and autonomy in many domains of legislative and administrative governance. As a result, each canton worked out its own school system in relative independence during the second half of the nineteenth century,³ and divergences in school policies persisted until the late 1970s.

How can various political and religious environments generate different educational systems and policies according to gender? Which factors promote or hamper gender equality in school policy and equal parental investment in girls' and boys' education? To answer these questions, this paper proposes a comparative study of two Swiss regions between 1860 and 1930. During this period, the implementation of compulsory schooling and the creation of public educational structures took place. At the same time Swiss cantons experienced, like all other European provinces, the revolutionary process of fertility transition⁴ consisting in drastic and lasting reduction in the number of children per family and increasing parental investment in children's education.⁵ Demographic research has emphasized that the implementation of mass education is likely to accelerate the onset of that type of transition. Education not only reduces a child's potential for work and increases its direct costs for the parents; it also speeds up changes in norms and values regarding the child as a future rather than a present producer.⁶

Sample, Sources and Data

The data were collected in the two cantons of Vaud (VD) and Fribourg (FR), situated in the French-speaking part of the country. Throughout all the period under observation, Vaud, which was a Protestant canton, was led by progressive authorities; this government resulted from a radical-democratic revolution (1845) that marginalized

² Mosconi, Nicole. *La société, l'école et la division sexuelle des savoirs*. Paris: L'Harmattan, 1994.

³ Hofstetter, Rita, Charles Magnin, Lucien Criblez, and Carlo Jenzer, eds. *Une école pour la démocratie – Naissance et développement de l'école primaire publique en Suisse au XIX^e siècle*. Berne: Peter Lang, 1999.

⁴ Coale, Ansley J., and Susan C. Watkins. *The Decline of Fertility in Europe: The Revised Proceedings of a Conference on the Princeton European Fertility Project*. Princeton, NJ: Princeton University Press, 1986.

⁵ Praz, Anne-Françoise. *De l'enfant utile à l'enfant précieux. Filles et garçons dans les cantons de Vaud et Fribourg, 1860–1930*. Lausanne: Antipodes, 2005.

⁶ Caldwell, John. "Mass Education as a Determinant of the Timing of Fertility Decline." *Population and Development Review* 6, no. 1 (1980): 225–55.

the liberal-conservative tendencies. Fribourg was Catholic and led by a conservative government – resulting from the failure of a radical-democratic revolution – that based its political strategy on a tight connection with the religious organizations. In each canton, two villages have been selected in such a way as to control the effects of socioeconomic variables and to isolate those of institutional factors. The first pair of villages (Chavornay/VD and Broc/FR) experienced a similar industrialization process (a chocolate factory) at the same time. The second pair of villages (Chevroux/VD and Portalban-Delley/FR), two neighbouring communities situated on the shore of the same lake, maintained an economic structure based on agriculture and fishing.⁷

The study makes use of a variety of sources at different aggregation levels. To document the cantonal ideologies, educational periodicals and school manuals are analysed. These documents provide valuable insights into the dominant discourses inspiring the cantonal authorities. Governmental and administrative sources are then explored to compare these discourses with the school policy that was effectively implemented.

Family strategies of educational investment in children are documented through two kinds of sources. Administrative sources at both cantonal and village levels (pupil listings, school attendance statistics and official correspondence) provide indications regarding the school career of children living in the study villages. They have been completed by assuming that the profession given in the marriage or death register, available in the family reconstitution database, is a good indicator of former education and professional training. Thus, for the 5042 legitimate children who survived until age 15, it was possible to reconstitute the school career of 2353 of them (1333 boys and 1020 girls).⁸

From Public Discourse to Private Behaviour: Religious and Political Ideologies, School Policies and Family Strategies in Education

How do the different discourses influence family strategies of investment in sons' and daughters' education? Two ways are possible. Ideologies can influence private behaviour directly, by changing people's norms and values; however, this line of research is difficult to operationalize and to investigate empirically in historical study. An indirect method of influence is much more important and easier to capture: the discourses of the elites serve as a kind of blueprint for the changing of the historical setting by the political establishment. The theoretical and methodological choice focuses on the role of institutions, which is crucial for the enforcement of norms and values. During the second part of the nineteenth century, state institutions gained in

⁷ Before 1900, villages are homogeneous with regard to religious affiliation. Between 1900 and 1914, a very slight religious heterogeneity occurs in the two industrialized villages because of the arrival of workers and managerial staff in the chocolate factories, but they would leave the villages during the war and the postwar crisis.

⁸ Fortunately, the missing data are concentrated in the generations born before 1880, when the implementation of compulsory schooling was in its initial phase.

importance in regulating family life, compared with religious or other traditional institutions. The term ‘institutions’ here not only refers to the administrative and political apparatus but also includes the system of rights and duties of individuals, the rewards for conventional behaviour and the sanctions against deviant behaviour. These individual rights and duties, shaped by gender too, are crucial for distribution of resources within the household, and thus for parental investment in education. Following S. Ryan Johansson, it could be said that state policies are a real force able to translate ‘cultural software’ – a set of abstract instructions with a strongly ethical character that the content analysis will bring out in the various discourses – into ‘a set of institutionalized incentives real enough to influence the “voluntary” behaviour of the majority’.⁹ State policies specify the level of these incentives (the cost for violating norms and laws concerning boys’ and girls’ education compared with the benefit of using their work for the family economy or the perceived advantages of education) and thus define the space of opportunities that family strategies have to accommodate.

With regard to ‘cultural software’, previous research into gender and women’s history has highlighted how Catholic and Protestant discourses define gender role differently and, consequently, emphasize other duties as women’s responsibilities and promote a corresponding ideal of women’s education.¹⁰

As a reminder, Protestant and Catholic elites of the nineteenth century shared the same view of separate gendered spheres, therefore excluding women from most public functions. However, theological and moral divergences produced different views concerning the access of women to knowledge. The Protestant discourse valorized the laypeople, encouraging the education of all ordinary Christians, whatever their sex. According to the principle of self-government, pedagogy must develop an enlightened mind and promote individual autonomy for women as well as men; such a viewpoint is encapsulated in *L’Éducation progressive*, the famous treatise written in 1828 by the Swiss educationist Albertine Necker de Saussure, re-edited many times and broadly diffused throughout Protestant Europe. In contrast, the education of Catholic girls gives the highest priority to moral behaviour, stressing obedience, innocence and purity; in this framework, the autonomy and initiative of young girls are excluded as dreadful temptations with the potential to threaten the sacred treasure of each young woman: her virginity. According to women’s ‘natural’ destiny, intellectual training is considered secondary and girls’ education is limited to preparing them for the roles of perfect housekeepers and pious mothers, able to edify and cure the

⁹ Johansson, S. Ryan. “Implicit Policy and Fertility during Development.” *Population and Development Review* 17, no. 3 (1991): 384.

¹⁰ Baubérot, Jean. “De la femme protestante.” In *Histoire des femmes en Occident. Vol. 4. Le XIX^{ème} siècle*, dir. Georges Duby and Michelle Perrot. Paris: Plon, 1991: 199–213; De Giorgio, Michela. “La bonne catholique.” In Duby and Perrot. *Histoire des femmes en Occident*, Vol. 4, 169–97; Houbre, Gabrielle. “Demoiselles catholiques et *mises* protestantes: deux modèles éducatifs antagonistes au XIX^e siècle.” *Bulletin de la Société d’histoire du protestantisme français* (janvier–février–mars, 2000): 49–68.

morality of husbands and children. Catholic elites relied on women's spirituality and sentiments to impede the drift to the feared modernity and secularization.

Following this body of research, this study first scrutinizes Protestant and Catholic discourses in the sample in order to verify whether such an opposition did indeed apply or should be slightly qualified.

Despite these interesting insights gained by the analyses of discourse, historical research has to take a step further, in ascertaining the actual impact of these cultural productions by describing the mechanisms through which this impact operates. First, men and especially women sometimes challenged the dominant ideologies, adapting their strategies to get round the specific constraints imposed on them or confronting the system from within, to make the most of historical opportunities. Second, between the discourses of the elites and the family strategies of investment in children's education, institutions intervene as an important mediator, and this intermediate structure also requires historical analysis. In the period under study, state institutions played a central role in the development of educational systems. As religious and political issues were tightly interwoven, religious ideologies inspired school systems and policies. Such an influence, modulated by the respective political ideologies, produced in each canton a specific school policy regarding gender. The second part of this paper is dedicated to the analysis of these cantonal school policies, focusing not only on laws and regulations, but also on their implementation and on the consequences for individuals in the selected villages.

Finally the impact of these ideologies and policies on parents' effective investment in girls' and boys' education is analysed for the four villages under observation, applying a multivariate analysis to the database of children's educational careers. Research into the history of education often omits the testing of hypotheses at the individual level, because of either the scarcity of sources or the time-consuming work required on a database. Combining discourse analysis, study of political institutions and statistical testing on a set of individual data, the results obtained in this research provide convincing evidence of the impact of Catholic-conservative ideologies and institutions in the discrimination against women in education.

Discourses on Education and Gender

Based on former studies on Protestant countries, it was assumed that the Protestant canton of Vaud produced more encouraging attitudes regarding the importance of education, specifically women's education. Educational periodicals constitute an interesting source for analysing religious sensibilities towards education;¹¹ religious

¹¹ The educational periodicals available for the two cantons are the following: *Bulletin pédagogique*, published in Fribourg since 1872, and the two corresponding periodicals for the canton of Vaud, which united during the period, namely *L'Ecole*, published in Lausanne between 1873 and 1901, and *L'Éducateur*, an educational periodical diffused in French-speaking Protestant Switzerland and published in Lausanne and Neuchâtel from 1865. All the articles that referred to the topic studied, namely gender, were analysed, namely 51 articles that have been coded and submitted to various grids of analysis.

elites were often involved in such periodicals – in Fribourg, a priest was chief editor of the *Bulletin pédagogique* during all the period under study. In the canton of Vaud as well contemporary education was pervaded by religious values, even though ministers did not necessarily participate in the editorial committee. Representative school manuals are also used, to confirm and qualify the findings with the analysis of material addressed to another type of audience, namely teachers and their pupils.¹² The content and presentation of these manuals were reviewed by a commission including political, religious and educational representatives. Through the choice of themes and the rhetoric of narratives, dominant values were diffused.

In the canton of Vaud, the school reading book glorifies in ardent terms the fight against ignorance, seen as a hindrance to historical progress. According to the Protestant educational periodicals, both men and women have to develop the intellectual capacities God gave them, for their own spiritual enlightenment and for the improvement of civic virtues. Knowledge is especially important for women, the mothers of future citizens. Even the fact that they had no political rights and that their future social role would keep them at home was not considered a reason for limiting the scope of their spirit: girls had to study history and geography to learn ‘the progress of the institutions and the advent of democracy’, and to know ‘where the rice and the coffee they use every day come from’. The school reading book presents the mother characters as playing an important role in children’s schooling: the mother is checking the homework, the exercise books, etc. Some alternative discourse, more conservative regarding women’s role and more sceptical about the necessity of knowledge for them is perceptible in the educational periodicals, especially for the beginning of the period. However, such texts later disappeared and a more emancipative discourse became dominant, even including feminist claims calling for gender equality in professional training, economic and political rights for women.

In the Catholic periodical, knowledge was seen as functional only: to make one’s living in the future. Girls’ education had to be oriented towards a unique objective: becoming a skilled and pious housekeeper. The texts opposed this ideal to two discredited feminine figures who were absolutely to be avoided: the coquettish woman and the learned woman. The rhetoric often joined these figures in the same sentence, inducing the idea that knowledge is a vanity, even a sin for women, and that too learned a woman would represent a danger for family and society. For girls, the Catholic educational periodical suggested, the school programme should be limited

¹² The content analysis of school manuals involves quantitative as well as qualitative examination (frequency of certain topics, frequency of the masculine and feminine characters, classification of the characteristics and actions attributed to them, implicit morality induced through the narratives, etc.). As this analysis is time-consuming, two reading books were concentrated on for the second primary degree (8–12 years), published in Fribourg (1890) and Lausanne (1903) and used in classes from the turn of the century until the end of the 1920s. Anon. *Livre de lecture à l’usage des écoles primaires du canton de Fribourg, Degré moyen*. Fribourg, 1890. Bonjour, Emile, and Louis Dupraz. *Livre de lecture à l’usage des écoles primaires du canton de Vaud, Degré intermédiaire*. Lausanne, 1903. These results were compared with the content of manuals for other school levels and for the period that followed; there was no obvious change of content.

by the 'nature' of women's minds (which cannot go as 'high' as men's), and above all by their social destiny. Therefore, girls' classes had to allow plenty of time for house-keeping and needlework, limiting the study of other disciplines to the most basic skills, giving up world history and geography as superfluous for example. In the school reading book, the exemplary mother never worries about school and homework, but teaches her child to pray and only recommends that he or she obey the teacher, who is God's representative. Contrary to the Protestant periodicals, this representation of women and knowledge is never debated and remains homogenous throughout the period under study.

Did the visions expressed in government sources confirm these attitudes towards the roles of women and their access to knowledge that were promoted in the respective educational periodicals? The official publications of the canton of Vaud¹³ affirmed the parents' duty regarding children's education in the name of progress and democracy. Education was seen as an end in itself, as a right due to everyone as well as a duty, since the improvement of everyone's education leads to the progress of the whole community.¹⁴ When referring to school pupils, the official publications always use generic terms (children, youth) and do not specify a specific category of children, girls for instance; whatever its sex or social class, every child has a right to education. Parents who neglect children's regular school attendance or who take them out of school before the legal age are blamed for not fulfilling their social commitments and they are judged severely ('petty-minded', 'selfish'). In the view of the government, farm work, poverty, or even economic crisis do not exonerate the parents.

In the official publications of the canton of Fribourg, the need for education is not seen as an end in itself, but is always justified by particular purposes. The potential beneficiaries of education are regularly specified according to sex or social class. For example, education is considered especially valuable for children of poor families, to guarantee that they will make an honest living in the future. Education has different functions for boys and girls, providing the former with the means for their future role in the labour market, preparing the latter for the homely duties awaiting them and warning them about the dangers of modern life. A real indulgence is perceptible when parents do not send their children to school regularly, the texts emphasizing the poverty of families that rely on children's work. Such parents are merely qualified as 'careless', as prejudiced and 'unable to recognize the advantages of education'; only parents who duplicitously mislead the authorities are judged severely.

¹³ For both cantons, the sources are the following: annual reports of the cantonal governments, messages presenting the new school laws, reports of the school inspectors, correspondence between cantonal and local administrations. The content analysis systematically compiled the terms and phrases supporting the arguments in defence of the necessity of education and regular school attendance.

¹⁴ During the 1920s, a slight modification was perceptible in this official discourse of the canton of Vaud, due to economic crisis and political change, when conservative and patriotic ideologies, above all a fierce anti-communism, gained in importance. In this frame, education was seen not only as an end in itself but sometimes as a guard against collective threats such as economic stagnation or the arrival of a foreign workforce.

The school attendance issue highlights the conflict between family economy and state priorities concerning the allocation of children's time. The government of Vaud clearly decides on this conflict in putting the long-term common interest before alleged short-term family interests: children's education should prevail over the economic needs of the family. On the other hand, the Catholic and conservative government of Fribourg tries to preserve a balance between family economy and the need for a socially useful minimal level of popular education. Interestingly, the school manuals reveal these diverse political strategies. In the Vaud manual, no narrative mentions the thorny conflict between school and family economy, never portraying for example a child who works at home instead of attending school. In contrast, this conflict appears on several occasions in the Fribourg manual, and the texts insist on the sacrifice of a father 'who deprives himself generously of your help to send you to school'. The moral of these texts shows the reward parents should receive for their economic sacrifice: the educated child would ensure their maintenance in their old age. In postponing the economic function of children, these edifying stories solve the conflict with a compromise that preserves the traditional morals of duty and obedience to parents without seemingly sacrificing children's education.

But such a redefinition of children's economic function concerns only boys, who continue their studies or training, never girls. Quite to the contrary, the Fribourg school manual portrays 'exemplary' girls who support their poor or infirm parents and therefore miss school, a situation never considered as problematic in the narratives, but presented as perfectly 'natural.' This analysis of school manuals provides the first clue that the neglect of girls' education in Fribourg permits a particular solution for solving the conflict between state and family concerning school attendance.

School Policies and their Application

The examination of school legislation and policies indeed reflects the influence of the respective discourses and ideologies. The canton of Vaud implemented compulsory schooling more efficiently: school attendance was regularly controlled and absenteeism severely repressed. Parents could not take their children out of school to work before they reached the legal age of 16, whatever their sex, and exceptions were extremely rare. Coeducation was the rule until the age of 16, therefore limiting gender differences in access to disciplines and programmes. Post-primary education for girls and boys was recommended and fostered by the decentralization of secondary or professional schools. Girls' educational institutes for post-primary education received public support.

In the canton of Fribourg, the control and repression of school absenteeism did not follow a regular and determined path, responding more to occasional incentives generated by political debates. Gender differences were already perceptible in the school structures, mostly segregated by sex, thus permitting the engagement of nuns as teachers in girls' primary schools, a guarantee both of morality and of lower staff expenses. The cantonal state provided post-primary public – and free – schools for boys only, whilst leaving girls' post-primary education to religious and private

educational institutes that only rich families could afford. Gender differences were also embodied in legal obligations: boys were bound to attend compulsory school until the age of 16, girls until the age of 15. Above all, the school system permitted many exceptions in school attendance for teenagers, especially for girls, whom parents often took out of school before they reached the legal school-leaving age.

Cantonal differences were reinforced or sometimes moderated by the implementation of these differing policies at the local level. The issue of gendered school liberation provides an interesting example. For the Catholic industrialized village of Broc/FR, the school policy of the cantonal and local authorities is well documented for the beginning of the twentieth century in the minutes of the school commission still available in the local archives. This commission had to discuss, among other things, the requests of parents who wanted to take a child out of school before the legal age (early school leavers); its recommendations provided the basis for the final decision of the cantonal inspector. As illustrated in Table 1, requests were dealt with differently according to sex, a gap even greater when remembering that girls reached the legal school-leaving age one year earlier than boys.¹⁵

Notices and commentaries show that this local school commission was often swayed by the arguments of the parents, especially when the requests concerned girls, and above all when the girl was needed for housekeeping tasks in the family.¹⁶ Such a situation occurred regularly in workers' families, when the mother was also employed in the factory. Whereas requests for boys were carefully examined and justifications required (a contract of employment had to be presented in the late 1920s), requests for girls did not have to meet such requirements and were dealt with quickly. This attitude comes as no surprise when remembering that the official ideology defined girls' education as the preparation for family tasks: in this respect, the role of girls in the family economy could not be in opposition to girls' education.

Table 1 Handling of Parental Requests for Early School Leavers (1911–1930)

	Boys	Girls
Absolute number of requests	63	61
Requests admitted in %	42%	59%
Requests refused in %	57%	40%

Source: Broc/FR, local archives, minutes of the school commission.

¹⁵ Moreover, these results are based on the final decision of the cantonal inspector. When considering only the opinion of the school commission, sometimes corrected in favour of girls by the inspector, the sex gap would be greater.

¹⁶ 'B. J. nous nous informe qu'il se trouve dans l'obligation de garder à la maison sa fille et son fils aîné pour faire le travail, vu que son épouse est gravement malade et qu'il n'a pas les moyens de se payer une servante. Nous lui avons immédiatement répondu que nous étions d'accord pour que la fille aînée reste à la maison, mais nous exigeons que le fils continue à fréquenter la classe.' Broc/FR, local archives, minutes of the school commission, 29 November 1926.

We turn now to the Protestant canton, to verify to what extent its generous principles of coeducation and universal access to knowledge were in fact consequently implemented at the local level. The conflict between family economy and school attendance did exist in the canton of Vaud, even if the official discourse was careful not to mention it. The school policy represented a controversial political theme in this period, opposing not only the cantonal state against the families, but also involving the local representatives who had to defend the interests of the heads of the families, their own electors. Careful analysis of such conflicts between cantonal and communal authorities interestingly shows that, in order to resolve them or to lessen parents' complaints, compromises were made on girls' school attendance.

Endowed with important autonomy in administrative tasks, these local authorities were for example legally able to decide, every year, whether the children should be relieved of compulsory school attendance at 15 or 16 – but this decision had to apply to all children of the village (girls and boys), contrasting with the individual treatment of parental requests in the canton of Fribourg. In 1906, to solve a thorny conflict between cantonal and communal authorities concerning the summer holidays, crucial for the use of child labour in agriculture, the cantonal state managed to maintain a sufficient amount of school hours in summer by making a concession to the local authorities: when fixing the age of school liberation, they were allowed to distinguish between the sexes, liberating all the girls at 15 and all the boys at 16, to satisfy recurrent parental requests. The cantonal government justified this proposal by arguing that a 15-year-old girl would be physically and intellectually better developed than a boy, thus hiding the sexual inequality behind a naturalist notion. Despite the violation of the coeducation principle thus introduced, none of the deputies reacted and the cantonal parliament approved the proposal without any opposition, indicating either that the naturalist viewpoint was largely shared, or that compromises on girls' education were considered acceptable. However, the number of villages who applied this sexual discrimination in compulsory school attendance remained low (always less than 10% of the 388 communes of the canton between 1906 and 1930); the collective consequence of the decision of the local authorities (which concerned all the girls) involved the balancing of the needs of poor families against those of affluent ones by the local council and the school commission.

Finally, what was the impact of these different discourses and policies on actual parental investment in education? Did the Protestant families, in the canton of Vaud, effectively allow more expenses for schooling their girls and boys than the Catholics ones in the canton of Fribourg? Were these investment differences shaped by gender inequality? We turn now to a multivariate analysis of children's educational careers.

Multivariate Analysis of Children's Educational Careers

The construction of the data-files for multivariate-analysis is based on the concept that costs of education entail two separable components.¹⁷ On the one hand, education

¹⁷ Caldwell. "Mass Education."

entails direct monetary costs, whose level was very different at the primary and the post-primary school for both cantons in the period concerned. Primary school in the village was free, with school material mostly paid for, thereby reducing the expenses to suitable clothes and shoes for going to school. But if the child attended a post-primary school, parental expenses increased dramatically because of fees, books, travel, meals outside the home and sometimes boarding expenses. Consequently, a first data-file was constituted that only indicates if each child has *attended a post-primary school or not*, in order to measure the impact of diverse variables on a child's chance of benefiting from such an expensive education.¹⁸

Which factors modify the chance of attending post-primary school? For the whole sample (first column of Table 2), boys see their chance multiplied by 3.2, compared with girls. For this period, such a gender difference will not surprise any education historian. However, when the sample is divided into two sub-categories determined by religion, the variable 'sex male' multiplies this chance 'only' by 2.45 in the Protestant canton of Vaud, compared with 4.75 in the Catholic canton of Fribourg.

Another interesting point is the comparative impact of the economic variable 'father's occupation'. A child's chance of attending post-primary schooling increases as the social scale rises, compared with the reference category of farmers, but social differences are more pronounced on the Catholic side. Children of the Catholic elite have 20 times more chance of attending post-primary school than children of Catholic farmers, the reference category; on the Protestant side, children of the elite have only eight times more chances than those of farmers. Such a result could attest to the more egalitarian character of the school system in the Protestant canton of Vaud.

On the other hand, education entails opportunity costs in reducing the child's availability for work. The most important conflicts between parents and authorities concern teenagers, whom parents wanted to remove from school as soon as possible, to use their help at home or their earnings to complete the household budget. In allowing their child to complete compulsory primary school, parents thus made an economic sacrifice; and a more significant sacrifice when the child attended a post-primary school that meant one, two or more years without earnings. Thus, the second data-file highlights this parental sacrifice in computing for each child *the number of years they attended school after the age of 13*. According to event history analysis, this file

¹⁸ There was no exploration of the specific content of the teaching in the various post-primary schools, as the decisive point for analysis is not pedagogical but economic. On the one hand, this post-primary formation was considered necessary for certain professional careers, on the other hand, it entailed costs for the parents: monetary costs (that primary schools did not imply) and also opportunity costs (the child's availability for work was reduced for one or more years). Following this criterion and according to the available sources (pupil listings, school attendance registers, correspondence asking for grants, subsequent profession given in the marriage register, etc.) it was possible to ascertain for 576 children attendance at the following post-primary schools: *apprentissages* (professional training for which a course of study with classes and exams existed in the canton during the period), *école normale* (for future primary school teachers), *école secondaire* (one or two years after primary school, in various courses of study – general, commercial, science/arts), *collège* or *lycée* (science/art course of study).

Table 2 Relative Risk of Attending Post-primary School

Variables	For all children No. of observations: 2353 Prob > chi ² = 0		Catholic children only No. of observations: 1193 Prob > chi ² = 0		Protestant children only No. of observations: 1160 Prob > chi ² = 0	
	Relative risk	p > z	Relative risk	p > z	Relative risk	p > z
Sex: male (reference: female)	3.29 1.00	0.00 ref.	4.75 1.00	0.00 ref.	2.45 1.00	0.00 ref.
Religion: Catholic (reference: Protestant)	0.76 1.00	0.01 ref.				
Father's occupation (ref. farmer – landowner)	1.00	ref.	1.00	ref.	1.00	ref.
Day labourer, unskilled worker	1.17	0.33	1.47	0.06	0.84	0.51
Factory worker	1.95	0.00	2.37	0.00	1.43	0.24
Trade-/craftsman, civil servant	2.80	0.00	2.75	0.00	2.82	0.00
Qualified occupation	12.30	0.00	20.68	0.00	7.95	0.00
Occupation unknown	1.51	0.20	0.50	0.52	1.72	0.12
Birth order						
Eldest of four children or more	0.77	0.06	0.76	0.17	0.78	0.17
Death of one parent	1.08	0.55	1.21	0.37	1.01	0.95

Note: Rates printed in bold are significant at minimum 90%.

is constituted by yearly intervals in order to measure, for each child, the impact of diverse variables on the likelihood of attending school during the next year.¹⁹

Which factors modify the risk for a child of leaving school earlier? In Table 3, values superior to 1 indicate a higher likelihood of leaving school earlier, values inferior to 1 a lower likelihood, both compared with the reference category of the variable concerned. When the model is applied to the whole sample (Table 3), the variable 'sex male' reduces this risk by 49% (the difference between 0.51 and the reference value 1 for 'sex female'). In contrast, the variable 'Catholic religion' increases this risk by 67%. When we observe gender discrimination by religious group, we see that the impact of the variable 'sex male' is much stronger in the Catholic sample. For Catholic boys, the risk of leaving school earlier is reduced by 62%, compared with Catholic girls. For Protestant children, the relative risk difference between girls and boys goes down to 16%. In contrast to the previous analysis, the influence of the economic variable 'father's occupation' is quite similar in both religious groups. Children of trade and craftsmen, civil servants, or whose father practises a higher qualified occupation have a better chance of completing primary school and even of prolonging their schooling for one or more years.

¹⁹ Bocquier, Philippe. *L'analyse des enquêtes biographiques à l'aide du logiciel STATA*. Documents et manuels du CEPED No 4. Paris: Centre français sur la population et le développement, 1996.

Table 3 Relative Risk of Leaving School Earlier

Variables	For all children No. of observations: 6940* Prob > chi ² = 0		Catholic children only No. of observations: 3156 Prob > chi ² = 0.01		Protestant children only No. of observations: 3784 Prob > chi ² = 0	
	<i>Relative risk</i>	<i>P> z </i>	<i>Relative risk</i>	<i>P> z </i>	<i>Relative risk</i>	<i>P> z </i>
Sex: male (reference: female)	0.51 1.00	0.00 ref.	0.38 1.00	0.00 ref.	0.84 1.00	0.01 ref.
Religion: Catholic (reference: Protestant)	1.67 1.00	0.00 ref.				
Father's occupation (ref. farmer – landowner)	1.00	ref.	1.00	ref.	1.00	ref.
Day labourer, unskilled worker	0.93	0.27	0.89	0.13	1.02	0.87
Factory worker	0.93	0.35	0.94	0.49	0.94	0.66
Trade-/craftsman, civil servant	0.84	0.00	0.84	0.05	0.81	0.01
Qualified occupation	0.61	0.00	0.63	0.05	0.66	0.07
Occupation unknown	0.92	0.58	1.15	0.66	0.89	0.46
Birth order						
Eldest of four children or more	1.10	0.07	1.12	0.11	1.04	0.61
Death of one parent	1.02	0.68	1.02	0.83	1.01	0.85

Note: Rates printed in bold are significant at minimum 90%. *The number of observations does not correspond to a number of children but to a number of years.

According to the results of these two regressions, Protestant parents incurred substantial opportunity and monetary costs for the education of their children. In contrast, Catholic parents avoided considerable education costs, above all by discriminating against their girls. Consequently, fertility control was less imperative for Catholic families, as demonstrated in another study.²⁰ This gendered cost disparity in the investment in children provides another explanation for the different paces in fertility decline of Catholic and Protestant families, mostly attributed to differences in sexual moral doctrine.

In the Catholic villages, two dominant strategies were identified that prolonged the economic function of girls for the household, to the detriment of their schooling. In the industrialized one (Broc/FR), many older girls left school early to look after the house and the younger children, thus permitting their mothers to work in the chocolate factory. In the peasant village (Portalban-Delley/FR), girls were sent away

²⁰ Praz, Anne-Françoise. "Politique conservatrice et retard catholique dans la baisse de la fécondité: l'exemple du canton de Fribourg en Suisse (1860–1930)." *Annales de démographie historique* 2 (2003): 33–55.

as servants before achieving compulsory schooling, thus reducing the costs of children by a strategy sometimes called 'ex-post facto family planning'.²¹

An effort was made to specify the family variables differently, in order to evaluate more precisely the factors influencing gender discrimination in education, above all family size. This methodological option is intended to clarify an important question and to distinguish two aspects of gender discrimination. Gender discrimination could be the rule for all Catholic families; or it could be a strategy adopted only by large families, in order to reduce the overall costs of education and to first guarantee boys' schooling, which is more severely controlled and promoted. If the latter hypothesis is true, girls' educational careers should be more influenced than boys' by family composition. A new model was applied to sub-categories determined by sex and religion. Table 4 analyses the relative risk of leaving school earlier for Catholic boys and girls comparatively.

Table 4 Relative Risk of Leaving School Earlier for Catholic Boys and Girls¹

Variables	Catholic boys No. of observations: 2000 Prob > chi ² = 0.35		Catholic girls No. of observations: 1156 Prob > chi ² = 0.02	
	<i>Relative risks</i>	<i>p > z </i>	<i>Relative risks</i>	<i>p > z </i>
Economic variables				
Village: non-industrialized (Reference: industrialized village)	1.05 <i>1.00</i>	0.60 <i>ref.</i>	1.21 <i>1.00</i>	0.03 <i>ref.</i>
Father's occupation (ref. Farmer – landowner)	<i>1.00</i>	<i>ref.</i>	<i>1.00</i>	<i>ref.</i>
Day labourer, unskilled worker	0.91	0.40	0.95	0.68
Factory worker	0.88	0.35	1.28	0.11
Trade-/craftsman, civil servant	0.76	0.04	0.92	0.51
Qualified occupation	0.53	0.02	0.92	0.86
Occupation unknown	1.01	0.98	1.08	0.87
Family variables				
Eldest of four children or more	1.05	0.719	0.85	0.17
Siblings				
Number of elder brothers	1.00	0.96	0.92	0.06
Number of younger brothers	1.01	0.90	1.07	0.07
Number of elder sisters	1.01	0.76	0.91	0.04
Number of younger sisters	1.00	0.97	1.07	0.12
Death of one parent	0.91	0.43	1.14	0.25

Note: Rates printed in bold are significant at minimum 90%.

¹Bold printed rates are significant at minimum 90%.

²¹ Garrett, Eilidh, and Simon Szreter. "Reproduction, Compositional Demography, and Economic Growth: Family Planning in England Long Before the Fertility Decline." *Population and Development Review* 26, no. 1 (2000): 45–80.

The economic variable 'Village: non-industrialized' obtains a significant result for Catholic girls only and increases for them the risk of leaving school. The dominant family strategy of the peasant village of Portalban-Delley/FR – described above – explains this result. The variable 'father's occupation' has a significant impact for Catholic and Protestant boys, but does not influence the girls' educational careers, whatever their religious affiliation. Finally, and this is a revealing result with regard to the above question, family composition happens to have a significant effect for Catholic girls only. The risk of leaving school early is reduced for them by 8% per older brother, 9% per older sister; the same risk increases by 7% per younger brother, 7% per younger sister (but this latter result is less significant). The more young siblings a Catholic girl had, the earlier she left school, especially when these siblings were brothers: if she had three young brothers for example, her risk of leaving school increased by 21%.²²

The same model has been applied to the Protestant sample. Family composition is also a significant variable for Protestant girls, but in one case only: when the relative risk is analysed of attending or not post-primary education (numerical results not given here). The chance of benefiting from such an expensive education reduces significantly for Protestant girls in proportion to the number of male siblings they have. It is important to underline here that the Protestant families had a certain degree of latitude for discriminating against any of their children, but this was only the case for the less regulated post-primary education; primary education and above all the duration of compulsory schooling were more strictly controlled in the Protestant canton of Vaud. And the extent of this discrimination against girls is also smaller in this canton, when we take into consideration that large families (and consequently on average numerous younger brothers) were an exception, because fertility limitation had emerged earlier and was more widespread.

Conclusion: Gender Discrimination and Institutional Setting

During the period 1860–1930 important historical changes upset the traditional family economy in Swiss villages and these changes were paradigmatic for the countries of Western Europe. On one hand, industrialization provided new labour opportunities for women and men and new outlets for agriculture; for some families, wage labour became the dominant source of income. On the other hand, economic change as well as the emergence of new political rights and the growing demand for education in all social classes made necessary the improvement of human capital and the democratization of knowledge. Governments created public education systems and implemented compulsory primary school. Could women too make the most of these historical opportunities and lessen the discrimination in the access to knowledge? Should this historical change reduce gender inequalities? Research in gender history shows that in periods of change there was a growing consciousness of existing

²² With respect to a Catholic girl who has no younger brother. This variable is not categorical but numeric.

inequalities and of the arguments – mostly naturalist – used to justify them; unfortunately, the low bargaining power of women could not impede the reproduction of gender inequalities under a new form, adapted to the changed constraints in their respective environments.

This study specifies under what historical conditions this general model applied, highlighting that the institutional constraints were decisive in shaping new gender inequalities. Focusing on diverse ideological – political and religious – environments, this paper tries to demonstrate how the same demand for an improvement in human capital, moreover in similar economic conditions, generated dissimilarly gendered educational systems and policies. The comparative analysis of two Swiss cantons provides a good example, as the framework of the federal law instituting compulsory primary school and a free public educational system (1874) allowed the cantonal governments enough autonomy to permit the influence of respective ideologies.

In both cantons, the elites involved in the creation of the educational systems shared the same naturalist representations of sex differences and the same convictions regarding the need to assign women and men to separate spheres. But the concretizations of these ideas in school laws and institutions followed a different path. In Fribourg, such naturalist and segregationist views combined ‘harmoniously’ with all the components of Catholic-conservative culture, from official discourse to family strategies, therefore leading to systematic discrimination against girls in education. In Vaud by contrast some components of the religious and political culture counteracted the influence of gendered views on education.

An important ideological component was the significance given to knowledge. In the Catholic-conservative culture, knowledge was always considered as potentially dangerous, a source of the sin of pride or of rebellion against the established authorities; education should above all have practical uses. Protestantism considered knowledge as a value in itself; all human beings, whatever their sex, have to develop the intellectual capacities God gave them.

A second component was the role of the State, its political values and objectives. In Fribourg, the ‘Christian Republic’ – as the government was dubbed by historians – used the Catholic moral to slow down the ‘drift’ to the dreaded modernity; girls’ education, mostly in the charge of religious congregations and pervaded by Catholic morals of obedience and purity, should advance the moralization of the whole society. In the canton of Vaud, the elites also sought to make use of women to instil the dominant values but the different contents of these values were in favour of girls’ education, since mothers had to educate the future citizens not only by prayer and good example but also through knowledge and conviction.

For the authorities of the canton of Vaud, popular education was a necessary condition of democracy and progress. As an important component of the Radical-democratic orthodoxy, this ideal could not be contradicted by systematic discrimination against girls in education. In the name of the future of the community, the State affirmed its legitimate power to constrain and punish parents who neglected their children’s education. It was only when this school policy caused acute conflicts that compromises were made, usually to the detriment of girls’ education.

In Fribourg, sacrificing girls' education to the family economy did not contradict the political culture and strategies. The importance of popular instruction was not associated with democracy. Conservative interests encouraged the maintenance of the traditional family moral of obedience to the head of the family, thereby restricting government action to curtail children's participation in the family economy. Instead of encouraging an old-age insurance system as in Vaud, the government of Fribourg upheld the support of old parents by their children. In that way the burden was mostly laid on girls, whose devotion and free work was taken for granted. Whereas the boys' utility to the family was postponed, permitting them to benefit from the new training opportunities, the girls were hindered from investing in human capital.

Many studies in family history have shown that, during periods of socioeconomic change, women acted as a buffer that ensured the maintenance of the family, attenuating the stress of change and uncertainty.²³ At the beginning of the twentieth century, such a role in the family could deprive women of a decisive asset in the new economic context, as it entailed the neglect of girls' education. Is that the case in the cantons studied?

In the canton of Fribourg, this economic role of girls became a deeply anchored family routine, made stronger by the delay in cantonal economic development and the long-lasting political dominance of the Catholic conservative party. As a result, the discrimination against girls in education persisted until the end of the late 1960s. In the canton of Vaud, the ideological context promoted the implementation of a relatively gender neutral school system. Nevertheless, this neutrality only masked the naturalist visions of gender roles, and these visions remained a possible source of new and sometimes subtle discriminations.²⁴ Fortunately for the Vaudois girls, the progressive nature of the political regime and economic development both limited such opportunities. Their better education permitted the women in this canton to be more active in their quest for emancipation.

²³ Louise Tilly and Joan Scott first established this mechanism in their comparative study of the industrial revolution in France and Britain. Tilly, Louise A., and Joan W. Scott. *Women, Work and Family*. New York: Holt, Rhinehart & Winston, 1978.

²⁴ A later example of such a resort to naturalist arguments for justifying sex-based discrimination: for 25 years (1957–1982), the school authorities of the canton of Vaud applied a sex-differentiated scale for the entrance exam to college that was more rigorous for girls, because they were supposed to be more mature and more studious than boys in adolescence. Seized by a group of parents who called upon the new constitutional article guaranteeing gender equality, the Federal Court abolished this cantonal discrimination in February 1982.