



Teaching "controversial issues": a living, vital link between school and society?

Until recently, most school disciplines were taught according to a positivist model, passing on "objective truths" about the past and present organisation of the natural world, society and its products. Pupils were required to subscribe to these representations in the name of a common, Republican culture. This led to intended neutrality, at least on the surface, in the way knowledge was expounded, casting aside all controversy, several-sided interpretations and debate.

This model gave a good showing throughout the twentieth century, whose spectacular development in the sciences and technical subjects it accompanied. No doubt it has reached its limits and is no longer appropriate for the world and its needs in the twenty-first century...

Current world issues are shaking what might have appeared to be a stable academic consensus. Unemployment, globalization, energy options, climate change, genetic manipulation are all areas that abound in controversial issues which confront the human community and which commit society to decisive choices for the present generations and for those of the future.

School cannot afford to remain a stranger to such issues. On the contrary, it must prepare all pupils to deal with them. Skills must be built up which will let young people get a proper grasp of their complexity in all its many-sidedness, and confront emerging, non-finalised, unstable knowledge that opens the door to uncertainties. Pupils must also be led to develop a critical approach to contradictory information and discourse and to make their own personal, but reasoned, opinion, backed up by valid argument and ethical values, and that is likely to deepen and be subject to revision. In this way they will be better armed to take part in public debate and have as much chance as possible of making a positive impact on the world.

But to tackle current controversial issues in education is also to accept to face up to episodes in the past that still leave the traces of open wounds. This is when the sensitive questions about history and memory are asked at school: the extermination of Jews in Europe, colonisation and decolonisation, immigration, etc., subjects which fan the flames of controversy in society and which school curricula have long held at bay by means of a prudish silence or by working round the issue so as to break it up and take it out of its context the better to smooth over the cracks.

Teaching controversial issues is a multi-risk business: for the school itself, for teachers and also for pupils. But it is also a powerful source of renovation and progress for all involved, so essential are the stakes at issue.

By making use of current research work we attempt to provide a clearer understanding of the particular epistemological and didactic features of controversial issues. As they have only recently been introduced into the school arena, an overview of the different disciplines will enable us to take stock of progress and practice in the field of teaching controversial issues. Another innovative feature, the growing use of debate as a means of learning, will then be explored. Finally, we will bring out the main messages that teaching controversial issues sends back to the educational system.

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Definitions, context and methodology

Definitions

In the English-speaking world, the notions of "controversial issues" or "controversial topics" appeared in the educational context in the seventies and eighties, fuelling a "vibrant literature" (McCully, [2005](#)) in favour of introducing these issues into the social disciplines of the school curriculum.

In his work *Controversial Issues in the Curriculum*, Wellington provides the following definition: "a controversial issue must: involve value judgements, so that the issues cannot be settled by facts, evidence or experiment alone; be considered important by an appreciable number of people" (Wellington, 1986, cited by Berg, Graeffe & Holden, 2003).

The report *Teaching controversial issues: A European perspective* from the Children's Identity & Citizenship in Europe programme (2003) fine-tunes this definition: "a controversial issue is one in which: there are competing values and interests; there is political sensitivity; emotions become strongly aroused; the subject/area is complex; the subject/area is of topical interest".

In the literature in French, it was not before the nineties that "controversial issues" were mentioned as subjects for teaching. More recently, the notions of "questions vives" (Chevallard, 1997) and "questions socialement vives" (QSV) have appeared borne on the wave of anthropology and didactics.

Alain Legardez (2006) gives the following definition: "we suggest calling a '**question socialement vive**' from three stand-points a question which takes (or may be made to take) an educational form and which has several characteristics.

- It is **controversial in society**: such a question concerns the social practices of those involved in education (within and without the institution) and refers to their social representations and their value systems; it is considered as an issue by society (globally or by certain of its component parts); it is dealt with by the media, such that most of those involved in education are, even summarily, aware of it. Its social impact on society is the first sense in which it is controversial.
- It is **controversial within the reference forms of knowledge**: there exist debates ('controversies') between specialists of the discipline fields or between experts of professional fields. [...] In addition, the references are [...] often to be found in social, cultural, political or ethical practices, also exposed to debates. [...]. Its social impact on scientific or professional, social, political and cultural circles is the second sense in which it is controversial.
- It is **controversial within educational forms of knowledge**: the question is all the more potentially controversial [...] in the educational field as it is so in the social field and in the field of reference knowledge. Pupils are directly confronted with it, as are teachers who often feel at a loss to deal with this type of questioning which is foreign to their standard teaching model.

QSV's are therefore, depending on current affairs, progress in research, the people involved, etc. **bearers of uncertainties, divergences, controversies, disputes, or even conflicts**".

As a corollary, it seems clear that an issue is not "socially controversial" by nature: it becomes so or ceases to be so «in line with debates that pass through society in a sufficiently audible way to have an impact on pupils' learning" (Beitone, 2004). «It is clear that these issues are necessarily dated, even if they are not 'current affairs issues' as such: they may remain controversial for long periods with varying intensity over time and in the different components that make up society" (Alpe & Legardez, 2000).

This is what leads researchers to use an atmospheric metaphor to assess the degree of controversy surrounding a topic at a given time. Issues, such as collaboration during the Vichy regime, that were "hot" yesterday have noticeably "cooled down"; in contrast, subjects that one might have believed to be definitively "cold", such as the eleventh-century crusades during which Christians fought Muslim armies to take control of Jerusalem, have recently "warmed up" again, posing an unusual difficulty for certain British teachers (Teach, 2007).

This variability with time goes hand in hand with variability in the social and geographical dimension. This can particularly be observed in the field of history, each country being one day or another called on to confront the least glorious and most traumatic episodes of its own history (wars, genocides, dictatorships, etc.).

"Such questions penetrate the school field in several ways:

- first, through current affairs which act as a reference for many teachers to motivate their pupils;
- next, via the 'social demand' (that of parents, unions, associations or intellectuals mobilised by these issues), which is not usually very clearly expressed but often forceful, leading to a given problem being included in the preoccupations coming within the province of education;
- finally, via the educational institution itself when it modifies curricula, creates new disciplines, etc." (Alpe & Legardez, 2000).

The research context

Given the work published, French research on the teaching of controversial issues or sensitive subjects seems to be focussed around three areas. The first two teams are working in close collaboration and are behind the problem of "socially controversial issues" in teaching.

- the "Didactics and anthropology" team from the UMR ADEF, one of whose research topics deals with "socially controversial issues", led by Alain Legardez at the Aix-Marseille teacher training centre (IUFM);
- the "[Didactics of emerging professional, scientific and social knowledge](#)" team from the national agronomy training school (ENFA) in Toulouse, directed by Laurence Simonneaux;
- the still youthful "Contemporary issues in teaching history and geography" team of the INRP, one of whose research topics is "[the teaching of controversial subjects in European history](#)", led by Benoît Falaize.

Methodology

The research teams of Alain Legardez and Laurence Simonneaux have progressively drawn up a methodological framework for dealing with a socially controversial issue and transposing it into the didactic field. This is based on:

- an epistemic analysis of the three types of knowledge at issue (reference scientific knowledge, social or "natural" knowledge, educational knowledge) and the relationships between them;
- the analysis of "legitimate" teaching situations, explicit or otherwise, on which the teacher bases his work; the "degree of controversy" through which he perceives the issue; the potential "risks" to which teaching socially controversial issues exposes both teacher and pupil simultaneously; the possibilities for "problematising, reproblematising and deproblematising" that the teacher has at his command to "activate" or "neutralise" the controversy surrounding an issue and make it "teachable";

- a model for "managing relationships with knowledge" which makes it possible to put the production and circulation processes of a socially controversial issue into contact with reference knowledge and practices, as well as with pupils' prior knowledge.

We will attempt here to sum up the main components of this methodology in which a definite influence from the anthropological approach can be recognised.

- Analyse the controversiality of the issue, in society and in the reference sciences;
- Make a finer analysis of why and to what extent the issue is a controversial one, or a potentially controversial one **in the educational context**:
 - through official, explicit curricula and instructions,
 - through existing school textbooks and teaching documents,
 - if appropriate, through assessment practices (subjects given in exams),
 - through current teaching practices that can be observed;
- Identify the **"natural knowledge" of the pupils** about this question, prior to its being dealt with in class: popularised knowledge and echoes of social controversies carried by the media, stereotypes and representations... Also, assess the **"risk of learning"** that dealing with the issue in class may hold for the pupils: calling into question prejudices and beliefs, shaking former knowledge, emotional reactions related to a personal experience, to do with the family or one's identity, etc.;
- In the same way, identify the nature and level of **knowledge mastered by the teachers**, given the fact that this knowledge is often recent, complex, multidisciplinary, unstable, subject to controversy and, what's more, competitive. In parallel, assess the **"risk of teaching"** that dealing with the issue in class may hold for them: calling into question any prejudices, didactic difficulties, lack of training and materials, difficulty of choosing the stance to take, fears of "setting fire" to the class with a red-hot issue and losing control of the situation, etc.;
- Work out the **epistemological and didactic issues** that the question might represent, with a view to optimising teaching:
 - knowledge that it might make it possible to acquire;
 - ethical social and political thinking that it can help develop;
 - cognitive abilities that can be brought to bear on it: analysis, thinking, arguing, distancing, critical sense, etc.;
 - types of behaviour that it trains: listening to others, respecting different points of view, communication and spoken expression, accepting contradiction, doubt and uncertainty, curiosity about the world, etc.

These five prior investigations seem essential for drawing up a didactic strategy in keeping with the issues themselves, through which strategy the desire to learn and the desire to teach will outweigh the risks outlined above. This (ideal) strategy is obviously specific to each question, but is nevertheless based on certain common principles:

- a **progressive** approach to socially controversial issues in different parts of the curriculum ("spiral" approach) ;
- careful use of the thermostat, to "cool down" head-on questioning that has become too hot or, conversely, to "heat up" an apparently too-distant representation of the issue so that, in both cases, the **"right distance"** can be found to deal with the issue with interest but without letting things get out of hand;
- **problemising** questions at a level appropriate to the knowledge, experience and abilities of the pupils;
- having recourse to different teaching approaches: **debates**, in small groups or with the whole class, role plays, etc. in conjunction with additional activities: providing contents, bibliographical research, text analysis, taking stances, etc.

Discipline-based approaches to teaching controversial issues

In this section we take a look at the way in which teaching controversial issues is used in specific ways by different predominantly social or scientific disciplines. These discipline-based features find expression essentially via:

- the official and pedagogical framework: laws, curricula, official rulings, teaching documents and textbooks;
- the didactics of the disciplines and classroom practices.

We will give an account of the space allotted to these aspects in recent research work.

History and geography

As far as the official educational framework goes, the so-called "memory" laws which have been voted over the last few years in France mean that we first have to look upstream of the national education system so as to take into account this first-level official framework that is French law.

□ "Memory" laws: instructions for school teaching

Article 2 of the "Law tending towards recognition of the slave trade and slavery as a crime against humanity" (n°[2001-434](#) of May 23rd 2001, known as Taubira's law) specifies that "School curricula and research projects in the fields of history and the human sciences will accord to the subjects of the Negro slave trade and slavery the important place they deserve [...]".

Along the same lines, article 4 of the "Law on recognition from the Nation and national contribution in favour of repatriated French people" (n°[2005-158](#)) was voted on February 23rd 2005 in the following form: "Academic research programmes award the history of French overseas presence, notably in North Africa, all the importance it deserves. **School curricula recognize in particular the positive role of French overseas presence and award the history and the sacrifices of soldiers from the French army coming from these territories the eminent position they are entitled to [...]**". However, by decree n°2006-160 of February 15th 2006, the second sentence (in bold in the quotation) was repealed.

The explicit mention made of "school curricula" in the text of these two laws – at least in their initial version – caught the attention of the scientific and educational community, drawing reactions from the media, but also leading to articles and in-depth thinking.

Of these, we should mention "L'histoire et la Loi" (History and the law), an article by the late historian René Rémond (2006), who wonders how legitimate the legislator was in giving a ruling in the field of historical truth, and about the risks involved in such rulings. Concerning article 2 of Taubira's law, he observes: *"Apart from the fact that we have a hard time defining what 'an important place' means – how many hours of lessons per year, how many pages in the textbooks? – this was to wander into an area that requires professional and scientific skills: it was to open the door to confusion in roles and responsibilities"*. He goes on: *"The Taubira law condemned colonialism; the following law reinstated it. The first imposed obligations on teachers that were quantitative in nature; the second dictated to them what their appraisal should be. The threshold has been crossed: the legislator dictates to the teacher how he should interpret history, and takes the place of the historian"*.

It is precisely the emergence and development of this controversy that Romain Bertrand (2006) carefully traces in his essay *Mémoires d'empires* (Memories of empires). Throughout his exploration, he observes a perverse misuse of the arguments of the supporters of the "Colonial Republic" which led to the attribution of memorial feelings, related to the (post)colonial issue, to the young people involved in the Autumn 2005 riots, rather than recognising that they were harbouring grievances of a social nature, related to feelings of exclusion and discrimination. The author expresses concern at the consequences of making use of the controversy over the memory issue when it gets to the point of evading the social issue.

❑ Curricula, official instructions and school textbooks in history and geography

Françoise Lantheaume (2003) has studied how the history curriculum has evolved in France, from the thirties to the present time. More specifically, on the subject of **colonising** and **decolonising Algeria**, she shows *"the ability of the formal curriculum to 'chill' the hottest topics, that are sources of controversy and that have not been scientifically stabilised, by a variety of means: organisation of the curricula [...], eclipsing (from the standpoint of the colonised peoples), potential controversies or the failings of the State in implementing Republican values not being stated in the textbooks except indirectly in the documents that appear in them, attenuation by means of appropriate figures of rhetoric or a change of scale"*. Concerning the current trend, she observes: *"It is not so much scientific relativism that has overtaken the teaching of history in the secondary school as a form of criticism which often has much in common with denunciation [...]. In contrast, criticism based on confronting different historical, social or cultural points of view is not much in evidence"*.

Benoît Falaize (2006) has made a study of texts which define the place of the topic of **immigration** in history, geography and civic education curricula currently in force in France. He distinguishes references to "the history of immigration" from those to "the immigration issue", a distinction which turns out to be a relevant one for differentiating between the two disciplines history and geography. The first observation is to do with the fact that immigration appears only very rarely in the texts. In the first years of secondary school (*collège*, in France) in particular, *"the history curriculum remains silent on population migrations throughout the ages, as it does for contemporary immigration phenomena (C19 and C20) experienced in France or Europe"*. The subject is mentioned in the *collège* only through the geography and civic education curricula. Another observation is that the term "immigration" is not much used, preference being given to less direct expressions, evoking, for example *"great population movements (which) now affect Europe"*, or the fact that France and other developed countries are welcoming *"men and women from highly diverse geographical and social origins"*. The term "immigration" is used more during the final years of secondary schooling (*lycée* in France). It is still striking to observe, in curricula and official texts, how the topic of immigration appears to underlie civic education, even as of the primary school. So it is that the official instructions for civic education in the first year of secondary school state the following: *"The variety of nationalities represented in a class, in a secondary school or in the community may, using historical examples of personalities who have acquired French nationality, illustrate the diversity of nationalities in France, a country of immigration"*. And Benoît Falaize observes that this occurrence of the term "immigration" is the sole one throughout all the *collège* curricula.

Anne-Catherine Porte (2006) has coordinated a similar analysis on the place of **slavery** in school curricula. This study brings to light just how little this question features in the official texts, but points out that the most recent curricula include it more. But she observes that, as a result of current political media coverage of the questions of slavery and the Negro slave trade, *"it is a question of answering the call of a 'memory duty' [...] instead of a 'history duty'. [...] The increasing rate at which texts are published brings out the ambivalence. Are we here talking about giving meaning, 'cooling down' this history by pushing this painful past into the distance, or answering public debates, or even satisfying groups of 'memorial' communities? Is it about encouraging the transmission of history knowledge as it is built, or using history as it is taught to reduce certain splits in the national identity?"*.

In *La fracture coloniale* (The colonial split; Blanchard, Bancel & Lemaire, 2005), the **chapter: "Colonisation et immigration : des 'points aveugles' de l'histoire à l'école ?"** (Colonisation and immigration: blind spots in history at school?) is by Sandrine Lemaire. Basing her work on both an examination of secondary school textbooks and a survey carried out in Toulouse on the historical knowledge of the population, she observes *"a clean break between national history and colonial history"*. In addition, the very limited treatment of these questions provides, she believes, a "dehumanised" and "disembodied" model of history, focused on the "traumatic episodes". This stance *"makes it possible to reformulate a 'Republican consensus' focused on the condemnation of the most easily-seen and revolting aspects of colonisation, but at the same time lays a mask over the colonial system itself"*. The author is concerned about the gaps in this teaching, which could be the "breeding ground for radicalisation".

Pascal Clerc (2006) looks at the "strange absence" of Israel, the Palestinian territories and, more broadly, the **Middle East** in geography curricula and textbooks since 1992, while nevertheless noting that the historical approach to the conflicts between Israel and its neighbours does feature in history textbooks. *"Just as with Eastern Europe, which is also absent from the school culture, the Middle East escapes from common representation and fixed ways of breaking up the world as seen from the standpoint of school"*. The author draws several complementary interpretations of this: uneasiness with regard to too-sensitive subjects, the difficult requirement of neutrality and objectivity (particularly in the choice of the terminology designating the parties involved), the complexity of an endlessly changing situation and pressure from groups *"who are watchful that the causes they defend be treated 'appropriately'"*.

For N. Tutiaux-Guillon (2006), these choices of content, which are echoed by teachers' unadventurous practices, denote a clear preference for *"the simple, the true, the safe. They enable the teacher to consolidate his position or to prevent his intellectual authority and his ability to maintain order from being broken down. At the same time, they implicitly give preference to a citizen who does not let himself have the wool pulled over his eyes by the media, who holds that controversies are mere products of opinion and therefore suspect"*.

The voices of geographers pleading for *"a geography which asks real questions about society, and which confronts divergent*

explanations" are hardly heard. But the author does hail the fact that some questions, favourable to a change in focal point have been inserted into curricula: the "political geography of the world", "the major power areas and the logics behind the way the world is organised", case studies which enable sensitive subjects such as frontiers, the control of water or industrial risks to be tackled.

□ Didactics and the practice of controversial issues in history and geography

In France

Historians and epistemologists are well aware that the history of present times "is permanently being rewritten and rethought, changes in the world inducing changes of outcomes and new questionings about historical evolutions", observes Nicole Tutiaux-Guillon (2006). But she nevertheless shows how school history and geography remain "unnameable to socially controversial issues". In her analysis, teachers "do not see much didactic value in debate, whether it be scientific or social". And while they do subscribe to the goal of developing the critical faculty of their pupils, "teachers advise [them] to be cautious when faced with the media because of the gaps and partisan viewpoints which may be conveyed by reporters". Any controversies that divide historians are arbitrarily decided upon before being delivered to schools as capable of univocal interpretation. "The obliteration of controversies is even more marked when subjects which divide French society are involved".

A summary report, drawn up from various studies and surveys in the field, takes stock of the issues and the practices of teaching two sensitive questions on the history curriculum in France: the holocaust and the decolonisation wars, specifically the Algerian war (Corbel & Falaize, 2003).

As far as the **Holocaust** is concerned, the report shows why teaching it benefits from an "exceptional status"... with all the risks that that implies: the risk of making the subject "sacred"; of unequivocally fixing the roles of executioner and victim; of "saturating" the pupils because of a "memory generation gap": a whole generation of teachers went through school without being taught about "that" (the camps, the deportation of French Jews, Vichy, the collaboration)". These teachers may then tend to go overboard when teaching these points... with the risk of saturating the pupils. There is also the risk of awakening violent reactions from pupils who have difficulty understanding the amount of time devoted to the Jewish people, while these very people are today being accused of oppressing the Palestinian people. Finally, there is the risk of the pupils' failing to understand this "implicit hierarchy in the priority assigned to paying off the memory debt", "as though that particular suffering was presented as being the most legitimate and more worthy of being known than others".

Teaching the Algerian war is a totally different issue; this appears as a particularly obscure point "on the blackboard of our history". The report underlines how extremely rare research into teaching this subject is – since then we should point out the sociology thesis and the work of Françoise Lantheaume who sheds some light on the subject. Rare, too, are available teaching media; this fact contributes to teachers' ignorance of the subject and makes them feel uneasy about dealing with it in the classroom. The report also points to a worrying "lexical and no doubt semantic blurriness, particularly when designating the pupils that [teachers] are talking about: 'immigrants', 'North Africans', 'Arab pupils', 'Muslim pupils', 'pupils of Arab origin', 'pupils of North African origin', 'second-generation pupils', etc.". This latter point is reflected in the reaction of certain pupils, who see themselves explicitly as "Muslims' rather than French, 'Muslims' rather than kabyles or Moroccans, and identifying with the Palestinian people". The authors' interpretation attempts to go beyond a first-level reading of this phenomenon, which might be nothing more than a manifestation of anti-Semitism. "Pupils in the public-sector education system, [these children] have discovered the words and the public frames of reference that they have perfectly taken on board and can make use of whenever they want, as to catch out the Republic. In the unequal treatment given to the Holocaust as compared with other subjects which interest them too (the Near East, the Algerian war, colonisation, etc.), they claim to perceive another injustice [...] which has to do with their being relegated within the public education system and too often considered as 'immigrants' – they who have never emigrated from anywhere".

A communication from Nicole Tutiaux-Guillon (2006) provides thinking on **the status and use as teaching materials of testimonies** from people who have experienced events in history. The didactician first admits that she is doubly cautious of the "duty to remember" and of "use [being made of this] [...] which might be limited to pathos and emotion". She then goes on to discuss the opportunities and risks of such an undertaking:

- receiving testimonies requires a disposition somewhere between empathy and critical distance, not attempting to find "illumination of specific events or factual data", but rather "the truth of an experience and of a voice";
- the teacher must understand the singular position of the witness, whether he be physically invited into the classroom or whether his testimony comes from sound archives (the Eichmann and Papon trials), or from written sources;
- "a testimony cannot be a narrative compliant with History" and it is essential to get the pupils to understand that the questions it raises must not be confused with research for factual information;
- "a testimony is not intended to act on our reasoning: it speaks to the heart, arouses compassion, indignation, revolt...". The teacher should therefore "examine the impact this has on learning: what important things will my pupils learn about the past, thanks to this emotion that they would not have learnt otherwise? And conversely, what are those aspects of history [...] that emotion would be likely to interfere with the understanding of?";
- while it is recognised that work on testimonies generates a great amount of motivation and investment from the children, the teacher must guard against the risk that the historical issue may slide into the background or even be lost sight of by them;
- the teacher must make his pupils understand the distinction between history and memory. This is made more difficult because "the difference between history as taught at school and memory is harder to establish than that between history and memory";
- we should keep in mind the question of legitimacy and truth systems: how can we judge the relevance and validity of a testimony and who should be allowed to make such judgements?

"Sensitive' periods of history make public use of testimonies both more difficult and more precious: more difficult because the context is a controversial one, and more precious because experience and feelings can help to understand the hesitations of a society in confronting itself with its past", concludes N. Tutiaux-Guillon.

Charles Heimberg (2006) asks: "How can learning about history and the social sciences **prevent racism, anti-Semitism and xenophobia**?" He reminds us why identity prejudices are controversial issues, not only in society but also in social sciences; he next explains how these questions can have their place in geography and history lessons; and then suggests three complementary approaches for potentially effective anti-racist work in the classroom, without becoming moralising:

- empathy and taking the victims' point of view into account, a necessary distinction between the facts and how they are interpreted;
- drawing on history as a backcloth, as a "framework that can be summoned as a reference for analysing the present and the manifestations of identity prejudices that can be observed there";
- taking the mechanics of social psychology into account: "the other" in the construction of the self, questioning the stance of passive witnesses that were often present between executioner and victim, between those who discriminated and those who are discriminated against.

Heimberg concludes that it is necessary to "enter into discussion with the pupils and let them forge their own values and opinions from what they have learnt".

Abroad

In the **United Kingdom**, the Historical Association recently published a report entitled *TEACH: Teaching Emotive and Controversial History 3-19* (2007). The authors justify the subject of their research as follows: "The study of history can be emotive and controversial where there is actual or perceived unfairness to people by another individual or group in the past. This may also be the case where there are disparities between what is taught in school history, family/community histories and other histories. Such issues and disparities create a strong resonance with students in particular educational settings". "The report found that there were many opportunities available to schools to consider emotive and controversial issues in history and that there tended to be more opportunities below the age of 14 than for older pupils. Good practice in the teaching of emotive and controversial history resulted when:

- There was clarity of purpose and a rationale for the school that emphasised identity, values and diversity.
- A high premium was placed on planning, ensuring the work had the right blend of content and hard thinking appropriate to age and ability.
- Planning and delivery built in sufficient time and opportunities to reflect and to cover the different perspectives and beliefs involved.
- Learners were exposed to a rich variety of appropriate and stimulating resources, such as music, film and pictures.

A number of barriers and constraints were identified:

- Teachers have been encouraged to play it safe in the classroom, with few incentives offered for them to take risks in teaching controversial topics.
- The tendency of teachers to avoid teaching controversial and emotive history for a variety of reasons which included feeling that certain issues are inappropriate for certain age-groups.
- A lack of teacher subject knowledge, particularly in the primary sector.

The report made a number of recommendations. These included:

- ensuring the teaching of emotional and controversial history is a whole school issue;
- encouraging rather than penalising teachers for the promotion of debate and risk-taking in the classroom;
- schools giving support to teachers when facing challenges from parents and communities".

In North American and Latin American the current of "native studies" has contributed to a makeover of history on the American continent, giving a fairer amount of space to the "native people" and to the destruction they have had to bear since settlers began to arrive from Europe. A very great amount of work examines these issues but cannot be gone into here.

And also

- The section "[Enseigner les sujets controversés](#)" of the site of the "Enjeux contemporains de l'enseignement en histoire-géographie" (*Contemporary issues in teaching history and geography*) INRP research team.
- "Quand les mémoires déstabilisent l'école": a bibliography drawn up as a guide in April 2007 by INRP. <<http://www.inrp.fr/lesmercredis/pdf/biblio250407.pdf>>.
- On the 2005 law on colonisation, the thinking of several researchers of the Toulon Human Rights League, including [Nicolas Ban- cel](#), [Alain Ruscio](#), [Benoît Falaize et Françoise Lantheaume](#), [Thierry Le Bars](#)...
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- Lemaire Sandrine (2006). « [Une Loi qui vient de loin](#) », *Le Monde diplomatique*, janvier 2006.
- Liauzu Claude (2006). « Enseigner l'histoire : douter et comprendre (1) ». *Cahiers pédagogiques*, n° 440, février. <http://www.cahiers-pedagogiques.com/article.php3?id_article=2160>.
- López Facal Ramón (2006). « Comment construire une identité européenne critique en classe d'histoire ? ». In A. Legardez Alain & L. Simonneaux (dir.). *L'école à l'épreuve de l'actualité*. Issy-les-Moulineaux : ESF, p. 159-170.
- Proske Matthias (2003). "The pedagogical form 'Classroom Instruction' and the Challenge of Holocaust-Education in Germany". Hamburg : European Conference on Educational Research. <http://www.uni-frankfurt.de/fb/fb04/personen/proske/publikationen/Challenge_of_Holocaust-Education_in_Germany.doc>

Civic education

Warning: In this chapter we will restrict ourselves to examining how controversial issues are dealt with in the context of the civic education school discipline in France. It would, of course, be of interest to broaden the perspective to include Education for Democratic Citizenship programmes, such as they can be interpreted at national and supra-national levels. But such a perspective is too vast to be developed in this newsletter. We will simply provide some bibliographical avenues in that direction. Obviously, the civic education discipline is not foreign to the project of citizenship education: it is even the discipline of choice! But it must not be taken as being identical. It will also be seen that the other disciplines dealt with in this section also include within their field approaches which have to do with citizenship education. And this is all the more the case when it is a question of teaching controversial issues.

In France, civic education is a transverse discipline in primary school. In the first years of secondary schooling (*collège*), this discipline is associated with history and geography. In the final years of secondary school (*lycée*) it was introduced into the curriculum as of September 1999 under the name "civic, legal and social education", initially in general and technological curricula and later in professional ones. Two special features mark out this subject in the official texts:

- defined as "**cross-disciplinary**", it may be handled by teachers with different specialities (history, geography, economic and social sciences or philosophy);
- it is recommended that the lessons take the form of a "**debate**".

Within the context of a [special topic issue](#) of the review *Sowi-online* devoted to civic and economic education in Europe, François Audigier (2003) gives a remarkable presentation of the civic education discipline in French schools (primary and secondary). He first covers the history of this discipline through the official instructions and how these have been interpreted by teachers. He then dwells on the present time. "*Changes in the word and in citizenship make it necessary today to train citizens with many skills. Amongst these, great stress is placed upon debating, the ability to accept conflicts, cooperation and working with others, the ability to find information, to take into account the many-sidedness of viewpoints, to see the many different dimensions of society's problems, to assess the solutions offered from the standpoint of fundamental human rights values, etc. [...] Civic education is, then, an opportunity to make classroom management change, but the latter is a powerful machine that can take hold of this type of education and put it back into its usual ruts. [...] For example, official speeches and texts are bursting with statements about the values that young people need reminding of. But what then? On the one hand, people behave as though these values inspired those who brandish them for others, leading pupils to believe that social life and adults' behaviour are in keeping with what is taught to them over and over again about this. [...] On the other hand, once the general ideas have been laid down, the values, the principles, the standards and the rights enter into conflict with each other. It is these conflicts and the questions they raise in order to understand them that it is useful, even indispensable to introduce into civic education curricula. [...] The relationships between knowledge and experience, long proclaimed as needs by educationalists, are particularly important for civic education". Teachers "are here subject to a sort of double requirement, for at one and the same time they must **recognise pupils' speech as valid and interesting, and help this speech to come forward and to construct itself**; the need for recognition expressed by pupils is tangled up with the educational dimension of the situation in which these same children are plunged. Finally, speech is meaningful only if it is taken seriously, in other words if it is followed by effects, if it has power. The question then shifts and opens up to an immense perspective: what powers, opportunities for initiative and freedoms are adults willing to leave to pupils?"*

A communication from Yves Alpe & Alain Legardez (2000) looked at the French civic, legal and social education curriculum (CLSE) when it was introduced into the *lycée*, and the scope it offered for socially controversial issues. "*The original feature of the CLSE curriculum lies in the fact that it leads into subjects via socially controversial issues. [...] The creation of the CLSE bears witness to a convergence of preoccupations concerning the social connection and incivility, while contentious issues such as wearing distinctive religious signs at school obviously show a divergence of opinion, but for this reason actually reinforce the controversial aspect of the issue. In other words, those involved may agree about the need to deal with a particular question at school, but disagree as to the way of dealing with it*".

But the potential of this teaching in fact appears to be much richer. Firstly, bringing together several teachers from several specialities opens the way to significant changes in practices. Next, if the debate methodology is properly controlled it can be fruitfully "exported" to other disciplines. The authors conclude with this hopeful statement: "*The CLSE bears within it the seed of a developing school citizenship which will concern not only the pupils but also, and in a broader sense, an upheaval in the way the French educational system operates today*".

Romain Orioli (2005) shows to what extent debate is the central pillar of CLSE. He refers to Habermas to remind us that it is the *deliberative mode* that characterises the exercise of citizenship and democracy. "*The rules of community life are the result of a public exchange of arguments rooted in reason that aim to produce agreement between those participating. To be a citizen is therefore to argue from the standpoint of one's conception of good and to show oneself able to take others' arguments into account*". But such ability needs learning, at the centre of which is the debate. Drawing on his own practice to provide an example, Orioli gives an account of debate work in the first year of the *lycée* on **homoparentality**, in eight sessions.

And also

About civic education :

- Tutiaux-Guillon Nicole (2003). "Civic, Legal and Social Education in French Secondary School: Questions About a New Subject". *Sowi-online*, n° 2002-2.
- Hemdane Estelle (2001). *Quelle est la spécificité de l'éducation civique, juridique et sociale par rapport aux SES ?* [Mémoire professionnel]. IUFM d'Aix-Marseille.

About Education for Democratic Citizenship: our [bibliographic selection](#).

Economic and social sciences

For Alain Beitone (2002), it is unfortunate that social and economic sciences (SES on the French curriculum) are "*confined [...] to one course in the lycée [...]. While social and economic issues (globalisation, unemployment, economic integration, transformations of the family, economic growth, deviance, etc.) are at the heart of political debates, the vast majority of pupils in secondary education receive no economic and sociological training to help them deal with these 'socially controver-*

sial issues' with a minimum of intellectual thoroughness". Only courses that include SES teaching can help tackle "questions sociales socialement vives", to use Legardez's expression.

Jean Simonneaux (2005) analyses in this way the early introduction of the **European reform of the Common Agricultural Policy** (CAP) in the agricultural curriculum. This early introduction shows how "determined the authorities were to adhere to current economic and political issues" and how keen they were to avoid errors committed in the past: during the mad-cow crisis they had been criticised for having delayed introducing study of this epizootic into the curricula. J. Simonneaux nevertheless observes that "At a time when pressure is being put on teachers to introduce teaching of this reform [of the CAP], a number of uncertainties remain relating to the application of this reform". This is a context, then, which looks like being a problematical one for proper teaching of the subject: incomplete information and didactic difficulties to do with external transposition. The author believes that this telescoping, whereby subjects are begun to be taught almost at the same time as practices emerge or knowledge produced, is a source of uncertainty which leads to teaching the construction of a problem issue rather than an analysis validated by the scientific community.

The 8th education biennial hosted a workshop devoted to socially controversial issues at school. In this context, Fanny Olivier & Marie-José Ramondetti (2006) offered the first part of some collective research into handling **globalisation** in school teaching. This topic appears in the curriculum at primary school level and can be found again during the professional studies diploma (BEP) and the general baccalaureate in the economic and social option (ES). The two workshops analysed the approaches via the official instructions and school textbooks. In primary school, globalisation is given as "a means to understand the world" while remaining centred on France. At BEP level, the approach offered is "technical and rather cold". But in the ES course it is "a clearly designated subject [...] and even an unavoidable one". Textbooks mainly prefer a so-called "inductive" approach. Texts within them "only very rarely lead to debate". Reference knowledge is sidelined. So even in the final year ES course the "controversial aspect" of globalisation is practically absent.

Let us continue with globalisation and the approach to it proposed by Jean Simonneaux & Alain Legardez (2006). This approach seems to us to be symbolic of the research and teaching methodology for socially controversial issues that we have attempted to outline above. The authors first observe the "polysemic and ambiguous" nature of the word "globalisation", which makes it practically impossible to draw up a definition that is both meaningful and agreed on by all parties. Its meaning can be grasped in the form of nuances of neighbouring notions: *internationalisation, world federalism, alterglobalisation, universality, world society, etc.* Each refers to certain conception of the world, favouring now the economic or financial dimension, now convergence towards a scale of unifying, if not unified, values. So it is that possible approaches to globalisation mobilise several reference frameworks, involving the areas of *economics, geography, sociology and political science* respectively. Additionally, globalisation is a notion that is "impregnated with ideologies" that are in opposition to one another: consumerist *neo-liberalism* and humanist *world federalism*. It is also "impregnated by social practices": *company practices, market consumption, political practices, cultural practices, etc.* As for the areas in which globalisation represents high stakes, there are also many of these: *food in the world, poverty in the world, the environment, culture, tourism, etc.* A. Legardez and J. Simonneaux next supply some "avenues for teaching". They propose getting to grips with the problem on the basis of links between the "scopes", the possible illustrations of the social practices concerned, and finally the theoretical problem issues that can be mobilised (for example, for the environment field: "governance", "sustainable development", "democracy", "regionalisation" and "centres of development"). As for how these are to be taught, debate "brings social and ideological questions related to globalisation into the classroom without providing "an" answer, but, on the contrary, bringing the different possible choices into confrontation with the values of citizens and therefore with society's choices".

Jane Méjias (2006) asks about how "gender" is dealt with in social and economic science teaching. She shows why the **issue of equality and relations between the sexes** remains a controversial one in both scientific work and society (the place of women in politics and the equality law, employment and salary levels, etc.). She looks for signs of this in school curricula, which she finds to be low, disseminated and mostly implicit. "The effect produced may be that of a hidden curriculum". As for the textbooks, the author notes that "the texts evoke inequalities between the sexes and point up the injustice of this state of affairs", while the "illustrations and exercises implicitly suggest that that is the way the world is and that it is not likely to change, that there is a kind of natural and biological order in the way roles are distributed on the basis of sex". It is certainly true that the questions that the pupils are asked aim to make them aware of the scale of inequalities and role asymmetry, but with no means of interpretation offered to the pupils "the issue is left very often just as a simple observation, which, as a matter of fact, is what the curricula ask for". The author then points to the difficulties which the social and economic science teacher is likely to run into when tackling the gender issue: girls reacting strongly to the injustice, boys sneering, the situation developing into a settling of accounts... or, conversely, the pupils submitting to "an overwhelmingly proven reality which takes on the appearance of a biological fatality". She underlines the sensitivity of the gender question at an age when pupils are building their sexual identity. Finally J. Méjias explores avenues for teaching gender and finding the "right distance" to allow the issue to be presented and to give meaning to what is being learnt: where private and public spheres meet, naturalising the "male-production / female-reproduction" model, and spirally-built teaching allowing pupils to grasp the levels of social, economic and cultural complexity of the issue.

And also

- Lebatteux Nicole (2006). « La question de l'entreprise en lycée professionnel ». In A. Legardez & L. Simonneaux (dir.). *L'école à l'épreuve de l'actualité*. Issy-les-Moulineaux : ESF, p. 203-216.
- Guiodoni Jean-Pierre & Beddock Dominique (2006). « L'enseignement de la mondialisation en terminale ES ». Lyon, 8^e biennale de l'éducation.
- Legardez Alain et al. (2006). « Que disent les professeurs sur l'enseignement de la mondialisation ? », 8^e biennale de l'éducation. <<http://www.inrp.fr/biennale/8biennale/contrib/affich.php?num=266>>.
- [Workshop](#) « Questions socialement vives à l'école », 8^e biennale de l'éducation et de la formation, Lyon, INRP, 11-14 avril 2006.
- Simonneaux Jean (2004). « Questions vives, questions économiques, questions citoyennes et politiques... ». <http://enfa.mip.educagri.fr/fr/rub-rech/doc_pdf/qsvpolit.pdf>.
- Sowi-online (2003), n° 2002-2 : "[Civic and Economic Education in Europe](#)".
- Beitone Alain (2002). « Un exercice de prospective : L'avenir des SES et de la filière ES ». <<http://www.ac-versailles.fr/PEDAGOGI/SES/vie-ses/hodebas/beitone15-03-02.html>>.

Teaching science subjects

In the educational context, controversial issues which confront science teachers are “**socially controversial scientific issues**”: they necessarily include a societal dimension. The first thing to point out is that research work into teaching such issues does not bear a strong imprint of the scientific discipline involved. This is to do with the fact that the difficulty of teaching is often less related to the scientific dimension of the issues than to their societal dimension, which is more unusual and challenging to science teachers. So it is that the research work that we have explored deals more with the relationships between the scientific approach and the societal approach than on the special relationships that a given scientific discipline has with controversial issues.

Certain countries have long been aware of the need for training in social-scientific issues that is distinct from conventional teaching disciplines (mathematics, life and earth sciences, etc.). Sciences and techniques must be put back in context, both in a historical perspective (the genesis of discoveries, the birth and evolution of the scientific mentality, etc.), in an epistemological context (the subjects of science, method, the nature of the scientific activity, etc.), and a societal context (jobs in sciences, relationships between science and economic development, environmental implications, ethical questions, etc.). We will first present the new disciplines which are tending to appear in the curriculum in North America and in Europe. This will provide an introduction to research work that takes a general look at the problems of controversial issues in science teaching. We will then turn to more specific work in the context of life and earth science teaching.

□ “Nature of Science”

In the USA, a common-core discipline known as “**Nature of Science**” (NOS) was introduced in 1996 into school teaching. It specifically aims at dealing with controversial issues.

The article by Backhus & Thomson (2006) presents the results of a national survey carried out among teachers several years after this teaching was put into place. This reveals that the factors which most effectively contribute to understand the NOS by American teacher are lessons centred on scientific method, research projects and lessons on scientific contents. The authors discuss the implications of these results, taking into consideration current research into NOS teacher training.

Michael Clough (2007) also looks at NOS teaching in the US, where he observes a worrying trend towards dogmatic transmission of “truths” about the nature of science rather than a real understanding of the epistemological issues it raises. He gives a list of assertions about science, about which there is generally agreement: “*scientific knowledge is tentative (subject to change); empirically based (based on and/or derived from observation of the natural world); subjective (theory-laden); partly the product of human inference, imagination, and creativity (involves the invention of explanation); and socially and culturally embedded. Two additional important aspects are the distinction between observation and inferences, and the functions of, and relationships between scientific theories and data*”. Without denying these assertions, the author recommends a certain caution as regards the use and pedagogical transmission of these “dogmas”: “**NOS tenets, like any list of key ideas, may easily be distorted by researchers, teachers and students. The problem is that tenets, like established scientific knowledge, become something to be transmitted rather than investigated in a science classroom**”. The author then assesses the consequences of this transmission, which is likely to make NOS teaching counter-productive with regard to the pupils, in terms of intellectual rigour. He also gives a reminder of the risks: “*One danger is the perception that all knowledge claims can be treated equally, [...] another [...] is that knowledge claims are taken out of context. [...] The final danger is a natural byproduct of the first two. When the structure and role of theories are oversimplified, there is little need to accurately portray the processes of theory change*”. To prevent these dangers, the author recommends an approach to NOS by questioning, bringing pupils to consider different viewpoints and build up a critical and argumentative reasoning faculty.

And also

- Nowotny Helga et al. (2005). *The Public Nature of Science under Assault: Politics, Markets, Science and the Law*. Heidelberg, New York : Springer.
- Khishfe Rola & Lederman Norman (2006). “Teaching Nature of Science within a controversial topic: Integrated versus non-integrated”. *Journal of Research in Science Teaching*, vol. 43, n° 4, p. 395-418.
- Brown Michelle, Luft Julie, Roehrig Gillian & Kern Anne (2006). “[Beginning Science Teachers’ Perspectives on the Nature of Science: The Development of a Nature of Science Rubric](#)”. Portland (Oregon) : ASTE International Conference.
- McComas William F. (1998). “The Principle Elements of the Nature of Science: Dispelling the Myths” (d’après un chapitre de son ouvrage : *The Nature of Science in Science Education: Rationales and Strategies*. Pays-Bas : Kluwer Academic Publishers) <<http://coehp.uark.edu/pase/TheMythsOfScience.pdf>>.
- Backhus DeWayne A. and Thompson Kenneth Wayne (2006). “Addressing the Nature of Science in Preservice Science Teacher Preparation Programs: Science Educator Perceptions”. *Journal of Science Teacher Education*, vol. 17, n° 1, p. 65-81.

□ Common introduction to scientific disciplines

In France

The “common core of knowledge and skills” in primary and secondary school (*collège*) came into force in September 2006. To mark the occasion, a “common introduction to scientific disciplines” was provided at a *collège* level. This teaching is presented as being cross-disciplinary. We offer here a few extracts from the presentation given in l’[Appendix 1](#) of the *BOEN* n° 6 HS, of 19/04/07: “*The production of a global and coherent representation of the world involves bringing together subject knowledge around topics such as energy, the environment and sustainable development, meteorology and climatology, health, safety, the statistical mode of thinking in our view of the world. This requires coordinated contributions from teachers of the subjects [...]. The historical perspective [...] makes it possible to present scientific knowledge as a progressive human construction and not as a set of revealed truths*”. “*Experimental sciences and mathematics [...] contribute to making the pupil responsible from the standpoint of the environment, health and safety. They encourage use of the critical faculty and reasoning; they thereby lead the pupil to adopt a reasoned attitude when faced with information from the media*”. As an introduction to the chapter on “sciences of observation, experimentation and technologies”, we find the following: “*Understanding makes it possible to act, so that techniques and sciences move forward together, develop manual and technical skills, concern for safety, the simultaneous taste for caution and safety. Little by little the major question of ethics appears, education in which begins early: what is it right, or wrong, to do? And according to what reasoned and sharable criteria? What responsible attitude should be adopted with regard to*

the living world, the environment, one's own health and other people's?". In the list of methods, the "investigative approach" is brought to the fore. It may lead to an "argued exchange around proposals drawn up" with "confrontation of the proposals, debate as to their validity and the search for arguments".

This "common introduction" does indeed open up an encouraging avenue for dealing with controversial issues. It is still too early for research work on the practice of this new type of teaching to be available. However, we present here the work which is contributing to epistemological and didactic thinking about the teaching of socially controversial scientific issues.

Jean-Pierre Astolfi (2005) first distinguishes the four families of objectives that science education can pursue: *conceptual objectives*, *awakening objectives*, *academic success objectives* and *intervention objectives*. The latter aim to inculcate individual and social forms of behaviour deemed to be desirable by society. The author here makes the connection with the notion of "educating for" (nutrition, sexuality, health, environment, etc.) but wonders if these objectives are necessarily down to science teachers. "When science teachers are in charge of 'educating for', society places them in a prescriptive stance, since it is expected of them that they share with the younger generation personal and social choices that seem socially desirable [...] it is expected of them that they **win conviction and subscription to ideas through debate and dialogue**, but be that as it may: this request from society breaks with the critical stance demanded by the experimental method. [...] It would be better to give up the myth of the social neutrality of sciences, restore multiple viewpoints with regard to one's knowledge and encourage debate over these issues".

For Laurence Simonneau (2006 ; 2005 ; 2003), "one of the aims of teaching is to develop understanding in pupils of the **interdependence that exists between society and science**. This is the **educational current known as Sciences-Technologies-Society (STS)**. In this field is to be found the study of controversial scientific questions. [...] Amongst other imperatives, pupils must understand the scientific contents implied and their epistemology, identify what is controversial about them and analyse their social (economic, political, ethical) repercussions. [...] Most of the problems encountered in modern society need more than just a scientific solution: they need the social implications that accompany decisions based on science to be taken into consideration". "A number of studies have shown that most young people and adults consider that scientific knowledge is born of observation and experimentation and that it is then fixed once and for all". It is therefore up to teachers to enable pupils to grasp the processes involved in the construction of scientific knowledge by successive rectifications. "It is possible to identify, with the pupils, the difficulties encountered and on occasion overcome, the relations in research, parallel paths followed, paths definitively or temporarily abandoned, avenues of progress imagined... to demystify the idea of pupils who consider that these forms of knowledge are omnipotent. They are non-stabilised forms of knowledge. Their very nature implies an often multidisciplinary approach with teachers of science, economics, even philosophy or literary subjects to get a better grasp of arguments developed by the media. The role of librarians is obviously essential". Concerning controversial socio-scientific issues, "the pupils have in their heads opinions, beliefs, attitudes and information from a variety of sources (including scientific popularisation), residues from earlier school learning, social representations... Research reveals that secondary school pupils have a very incomplete knowledge of the scientific fields involved [...]. Confusions of terminology abound, although they use scientific jargon [...]. The procedures implemented, the scientific and technical limits are largely unknown". "Among the recommended teaching strategies [...] in first place come classroom debates in which the declarations of the different researchers, institutions, journalists or reporters... are debated and examined. [...] One of the aims is to allow pupils to identify their own affective stance, the arguments used by scientists, popularisers, teachers, the other pupils and themselves, their validity, the stages in a decision-making process... The goal is to encourage identification of those criteria and that information which support a particular stance (one's own and that of others)".

In the United Kingdom

In an article that appeared in the *International Journal of Science Education*, C. Oulton, J. Dillon & G. Marcus (2004), express concern about the attitude of mistrust shown by public opinion in the UK towards science and scientists. According to them, this attitude significantly distorts the public debate on controversial socio-scientific issues. They see the cause of this to be an erroneous representation of the very nature of science and scientific activity, for which the media are responsible, but also current scientific teaching. To put this right, the authors suggest "reconceptualising" the teaching of controversial issues and then state a number of teaching principles:

- "focus on the nature of controversy and controversial issues; that is, that people disagree; have different worldviews, value and limitations of science, political understanding, power, and so on;
- motivate pupils to recognize the notion that a person's stance on an issue will be affected by their worldview ;
- emphasize the importance of teachers and learners reflecting critically on their own stance and recognize the need to avoid the prejudice that comes from a lack of critical reflection;
- give pupils the skills and abilities to identify bias for themselves, encouraging them to take a critical stance towards claims of neutrality, a lack of bias and claims to offer a balanced view;
- promote open-mindedness, a thirst for more information and more sources of information and a willingness to change one's view as appropriate, and avoid strategies to encourage pupils to actually make up their minds on an issue too hastily; and
- motivate teachers, as much as possible, to share their views with pupils and make explicit the way in which they arrive at their own stance on an issue".

In the same review, the article by Ralph Levinson (2006) expresses the need for a more solid theoretical backing to deal with controversial socio-scientific issues in the UK. He develops the conceptual bases of a model for teaching such questions in secondary school. His approach is based on:

- a typology of controversies in nine categories of reasonable disagreement, which makes it possible to graduate the controversy and the risk level;
- an inventory of communicative virtues which allow people to engage in reasonable discussion of contradictory positions: patience, tolerance, respect for differences, attentive and thoughtful listening, openness, honest self-expression, adherence to agreed procedures, freedom of expression, equality;
- the distinction between modes of thought: *narrative mode* and *logico-scientific mode*.

Levinson then proposes some examples to illustrate possible uses of this model in teaching situations.

□ Life and earth sciences

Warning: As with civic education, it should be pointed out that the available space in this letter does not allow us to develop the approach to controversial issues in the broader framework of "education in the environment and sustainable development" (EESD), by formal or non-formal education. And yet we cannot be unaware that in France, as in a number of countries, EESD at the present time is a very fruitful area where inter-, multi- and cross-disciplinary research converges, shedding light on issues that are socially very controversial. As this subject is too vast, we refer the reader to the first *Dossier de la Veille*, which appeared in 2004 and was devoted to [EESD](#).

In France

Up until the year 2000, controversial issues relating to the **environment** and **biotechnologies** were practically absent from agricultural teaching (there were some aspects to do with cattle rearing: artificial insemination, etc.), ignoring the emergence on the social scene of questions such as transgenic soybean or cloning Dolly the ewe. The turn that events took in 2000 seemed a radical one, if we are to believe the [memorandum](#) from the Ministry of Agriculture which introduced the new curricula. The names of disciplines include different dimensions ("biology-ecology", "agronomy-region-citizenship"); their purpose is to allow pupils to "decode world events involving biological sciences in a critical manner" and to develop "their awareness as citizens". The memorandum makes clear "the contradictory analysis of the reliability of knowledge (current examples of GMOs, the greenhouse effect, etc.). That knowledge in complex and/or imperfectly mastered domains is relative will be brought to light". The memorandum also recognises that "the increasingly important role played by biological sciences [...] in the world economy, agriculture, health and procreation makes it necessary to exercise doubt and one's critical faculty, and, when available, the contradictory analysis of the reliability of knowledge (current examples of GMOs, the impact of nitrates on health, food contamination, etc.)". Pupils are therefore invited to take part in "dialectic thinking about the importance and the seriousness of the perils that human activities inconsiderately inflict on the biosphere on a daily basis. They will become aware that such thinking necessarily leads to ethical requirements that concern them directly, in total opposition to an anthropocentric conception of the exploitation of natural resources". To this end, active participation by pupils and the organisation of debates are encouraged.

Laurence Simonneaux (2003) describes the "identity malaise" and the difficulties encountered by science teachers in agricultural teaching, following this curriculum makeover. Initially trained according to a "model that puts strong emphasis on production", they are "lacking in references to cope, for example, with alternative, extensive paths in agriculture". "Some even feel responsible for having zealously backed the standardisation of farms", especially by recommending intensification, whereas the current message is in favour of extensification. These teachers "are afraid that they will no longer be recognised as competent by their pupils if they do not give out technician-type messages [...]. They admit to being less well prepared to grasp the systemic and interdisciplinary approaches". In particular, they do not feel that they master biotechnological knowledge; while some are "afraid to pass on the message of agrochemical firms, others consider that any new scientific knowledge can only be progress that they have a duty to teach".

L. Simonneaux next looks at "representation-knowledge systems" that take pupils and teachers into the controversial issues posed by biotechnologies, upstream of dealing with them in class. Those of the pupils can, broadly speaking, be summed up in two sentences: "Researchers are sorcerer's apprentices" and "You mustn't touch nature". More subtly, "even when they do not master basic knowledge, pupils express opinions which depend on the applications under consideration, the imagined context, the organism 'manipulated', the goal pursued. Medical applications gain the best acceptance, followed by veterinary applications, but food industry applications are rejected". Teachers' representations were studied in a survey on a sample of 150 teachers of different disciplines, questioned on 10 biotechnological applications. It turned out that these applications are more a source of concern for human science teachers than those of scientific disciplines. Among the latter, it was even the biologists that seemed the least concerned... a result that is not well accepted by those concerned, the author tells us.

In the United Kingdom

The *Institute of Education* at London University carried out a piece of research into the way **controversies relating to bio-medical issues** are dealt with in the school curriculum, in England and Wales, published under the title *Valuable lessons: Engaging with the social context of science in schools* (2001). This study first shows that 60 per cent of teachers from all types of institutions and all subjects think that there is too little coverage of the issues related to biomedical science, whereas these are of obvious interest to the pupils "in building self-confidence, developing lines of critical thinking and enabling students to deal with socio-scientific issues in a balanced way. [...] The majority of science teachers consider it their role to present the 'facts' of their subject and not to deal with associated social or ethical issues. [...] In general, science teachers feel that they lack the skills, confidence and the time to initiate and manage classroom discussion. Much could be learned from their humanities colleagues who demonstrably promote student discussions of ethical and social issues. Humanities teachers appear most confident when covering general ethical and social issues; they feel significantly less confident though about addressing socio-scientific issues. Many consider the scientific facts incidental to their teaching of issues-based topics - a source of concern for science educators who feel that disregarding the science and its accuracy reinforces student misconceptions. [...] A lack of collaboration between different subject departments currently exists in schools. Science is perceived as value free and humanities as value laden. This results in the teaching of facts and the development of opinion and moral reasoning being kept separate. However, one promising model of cross-curricular collaboration identified is the 'collapsed day' - during which teachers work together to take students off-timetable to explore a theme. The introduction in England of Citizenship Education [...] could act as a catalyst to facilitate greater coordination among science, humanities and other teachers and develop closer working ties. [...] If future generations are to engage with the issues raised by science in a considered and responsible way, the education community must confront a range of challenges. These include establishing a clear philosophy about what science education should be, and how to resolve the demands of a conventional science education with a curriculum that examines science in society". The recommendations made in the report concern the organisation of the curriculum, teacher training, the production of teaching media, the slant taken on subjects in exams, encouragement and support for teachers. There is also a more original recommendation: "The science of the brain needs to be incorporated into mainstream science and post-16 biology, providing opportunity for greater consideration of the issues related to neuroscience and mental health".

In the United States... and beyond? The intrusion of "Intelligent design" into the curriculum

The teaching of the origins and evolution of living things was recently caught up in a serious public controversy in the USA about "Intelligent Design". Led by a Christian and conservative think tank, the creationist doctrine of *intelligent design* (ID) refutes the Darwinian theory of the evolution of species on the grounds that it is insufficient to explain the "irreducible complexity" of the origins of life. To back up this thesis certain observations about the universe and the living world are put forward which are said to be better explained by intelligent causality than by the random process of natural selection.

The powerful lobbying exerted over the last few years by the upholders of this doctrine (the Institute for Creation Research and the Discovery Institute, in particular) has successively led several American States (Alabama, Kentucky, Pennsylvania, Ohio, Mississippi, Kansas, etc.) to include Intelligent Design in public teaching of life and earth sciences. ID is presented as a scientific theory on the same footing as Darwin's theory with which it is put into competition.

Many researchers have made their voices heard in protest against the legitimacy of such teaching. We may mention those of Bruce Alberts, president of the [National Academy of Sciences](#) (NAS), and Jay B. Labov, senior advisor of the [Center for Education](#) of the National Research Council (Alberts & Labov, 2004). They show that ID is not a scientific theory and, as such, has no place in public science teaching: "*Intelligent Design is not scientific because its ultimate tenet that life on Earth is the result of the work of some intelligent being is scientifically untestable and therefore cannot be invalidated through scientific means*". The authors also express concern over the false epistemological representations that ID induces, in contradiction with the Nature of Science. They energetically contest the fallacious recourse that the upholders of ID have to the notion of controversial issues: on the basis of the currently favourable attitude towards the introduction of controversial subjects in school teaching, the militants of creationism make use of the argument that "*discussion of disputed views of academic subjects is a necessary element of providing a balanced education*". In this respect, it can be noted that the stance taken in August 2005 by George W. Bush, based on the educational benefits to be obtained from confronting ideas and viewpoints to validate joint teaching of the two theories on origins, involves the reasoning contested by Alberts & Labov.

In addition to the publication of works and articles, the NAS has also attempted to take action against the education departments of the various States who have accepted Intelligent Design into their curricula. Specifically, it points to the tendentious choice of works and websites quoted as references in the documents used in school curricula, which gives preference to documentary sources that are favourable to ID as opposed to scientific sources on the theory of evolution (Ohio, is quoted as an example by the biologist Elsner, project manager of the [National Center for Science Education](#), 2004).

In an article in *Le Monde* dated 28/05/05, Jean-Pierre Stroobants relates the declaration made by the Dutch education minister, Maria van der Hoeven, a former teacher and headmistress, "*in which she stated that she believed Charles Darwin's theories to be 'incomplete', and that 'new things' had been discovered since: specifically, so-called scientific creationism and 'higher intelligence'*". The minister also proposed "*organising a debate on the teaching of theories of evolution in schools in her country*". The journalist reminds us that an "*agreement between the different parties six years ago had led to Darwinism featuring in the curriculum of all schools in the Netherlands, including those of different religious denominations that the State finances, but over which it has no in-depth control*". It should be noted that Mrs. van der Hoeven's proposal does not seem to have met with sufficient support from her government.

In France, a "creationist offensive" (*Le Monde*, 02/02/07) made its presence felt by sending a work by Harun Yahya recently translated into French, *L'Atlas de la création* (*The atlas of creation*) to all schools. In 770 lavishly illustrated pages, this book refutes the theory of evolution and develops a Muslim-inspired creationist theory. The education ministry reacted by asking the academy heads to make sure that the work was not accessible to pupils, students and teachers.

In a [filmed interview](#) put on line on the site *Cité des sciences et de l'industrie*, the science historian Patrick Tort goes over this event in detail and gives an epistemological criticism of creationist theories. His conclusion can be summed up in a single, direct sentence: "*You don't have to be democratically for or democratically against the law of falling bodies; well it's the same for evolution!*".

On this same site is also to be found a complete [document source](#): "*Le dessein intelligent ou le créationnisme nouvelle mode*" (Intelligent design, or creationism, new style). Finally, we should draw attention to the recent article by the philosopher Dominique Lecourt, who analyses "*Le créationnisme scientifique américain et ses avatars*" (American scientific creationism and its manifestations) (2007).

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Learning to debate at school

From discussion to debate

In his work devoted *La discussion en éducation et en formation* (Discussion in education and training), Michel Tozzi (2004) defines discussion as a means to "enable a group to examine a problem in suspense in order to attempt to formulate it and move forward collectively towards its solution, by articulating different dimensions: linguistic, verbal and non-verbal, to involve the participants cognitively and affectively". "Democratic demand, inseparable from the obligation to engage in discussion in order to determine the common good, seems to develop with the rise in the educational level of the population, and with societal complexity, which, multiplying the levels and the instances, must articulate the diversity of groups to which one belongs and with which one shares interests".

For several years, debate has been on the agenda in the French educational system, explicitly called up for certain subjects, but also in the life of the class (councils, debates to resolve issues) and its pupils (to appoint delegates). It is also, as was seen in the preceding section, recommended as a teaching resource of choice for dealing with socially controversial issues in class. "Debate appears as an activity that provides structure in a transverse manner at school". "This success could be explained by the fact that debate is the meeting place of purposes judged to be currently decisive for the educational system. It is **at the crossroads of language mastery [...], education in civility and citizenship [...], and the co-construction of knowledge**".

"**Debating** has thus been given didactic content at school as a learning objective. [...] In doing this, it **attempts to articulate** – and this is its 'symptomatic' aspect – **what is causing a crisis at school** (and in society):

- the relationship with the law, via a **more cooperative relationship with power**, accepting the merits of the exchange rules [...];
- the relationship with knowledge, via a **signifying, non-dogmatic and socialised relationship with knowledge**, more in keeping with the modern epistemological relationship with truth;
- the **quest for meaning**, by giving back meaning to school learning [...]".

So "debate is that move from a power relationship based on force, to a common, intersubjective world, regulated at worst by the civility of the conditions which make discussion possible (listening to, and respecting the other) and at best by constructive cooperation in a common search for truth (philosophy of thought)".

R. Étienne & M. Gather Thurler (in Tozzi, 2004) bring to light the essential issue that discussion represents in schools, when the objective of acting in accordance with the principles of democracy is pursued. "An organisation which explains, justifies, negotiates and discusses is an organisation that increases its knowledge [...] while enabling those involved at all levels to have access to decision-making power, so as to enable them to appropriate it and adhere to it. This is a '**learning organisation**' which develops its 'collective intelligence' [...], makes the best use of everyone's knowledge and skills, encouraging the confrontation of ideas and going beyond ambivalence when faced with partners that one would like to be both creative and docile at the same time". However, the success of such a project "is closely related to the ability of all those involved to include new and durable behaviour in their daily operations, on the basis of analysed situations or practices".

Teaching socially controversial issues comes fully within this perspective, developing not only argument skills in pupils, but also leading them to practice the processes of participative democracy.

Debating in the classroom and the teacher's position

For Jean Simonneaux (2004), "Without pretending to be neutral, teaching 'critical' knowledge must be based on the teacher's deontology. This deontology can only come within the tradition of philosophical teaching which is based on the freedom and diversity of positions in order to debate about values and principles. We can then assume that there are two possible positions out of the four imagined by Kelly (1986): neutral impartiality and committed impartiality, the position of neutrality being seemingly an impossible one to hold and committed partiality hardly acceptable from the ethical standpoint".

Deborah Cotton's study (2006), which appeared in the review *Educational Research*, in turn questions the validity of the "neutrality and balance" stance, which, in the USA is recommended to the teacher when dealing with controversial issues, according to a number of pieces of research and practical guides. "Three experienced teachers delivering an A-level geography course (Schools Council 16 – 19) were selected and studied, along with a specific group of their students (aged between 16 and 18 years). A non-interventionist approach was preferred; therefore it was necessary to find classrooms where controversial environmental issues were already being taught": Indigenous people's land rights in the rainforest, the role of NGOs in Antarctica, reconciling the needs of conservation and tourism in National Parks. Observation, recording and analysis of the discussions show that "all of the teachers studied experienced great difficulty in implementing their beliefs about balance and neutrality, and the classroom data suggest that the influence of the teachers' own environmental attitudes was greater than they either intended or, in all probability, realized. Moreover, there were occasions where the teachers' intent appeared to be persuasion rather than instruction. Their desire not to express their own views frequently led to the situation where these views were expressed indi-

rectly in the form of questions, or by control of students' turns in discussion. Whilst these strategies enabled the teachers to avoid explicitly stating their views, such an indirect expression of attitudes may have been harder for the students to challenge than a direct argument presented by the teacher". So, D. Cotton suggests that "teachers have to choose between explicitly and implicitly expressing their attitudes, rather than the false dichotomy of advocating their views or concealing them from the students". Whilst most teachers will be aware of the existence of a 'hidden curriculum', they may not understand the forms in which it might be transmitted through their teaching.

Alan McCully (2005) draws on his professional experience as teacher, curriculum developer, researcher and teacher educator working with controversial issues in the context of the Northern Irish education system during thirty years of conflict and subsequent peace-building. He first offers a critical presentation of the various approaches and didactic programmes that have successively been implemented during this period, and then puts forward ten basic principles on which the educator can build an effective teaching strategy in the special context of a society split by conflict or war:

- A trusting, open relationship between practitioner and students;
- Understanding where the group is coming from, being sensitive to personal biography and acting through professional judgment;
- Sharing biography, acknowledging the possibility of uncertainty. "The practices of witness and testimony lie at the heart of what it means to teach and learn". In divided societies 'neutral chairmanship' is not an option. Practitioners have to strive to be impartial;
- Recognising the legitimacy of expressing strong points of view but ensuring that all views are challenged;
- Building up the confidence and capacity to handle potentially controversial issues;
- Using distancing and comparative study, when appropriate;
- Using key concepts as reference points;
- Examining multiple perspectives and interpretations;
- Underpinning opinion with enquiry and evidence;
- Using experiential learning approaches and attractive resources as short-cuts into controversy.

Favre et al. (in Tozzi, 2004) consider that introducing debating into school should be seen from the perspective of "a true education in democracy", in the tradition of the teachers of the New Education. After studying the possibilities of using other people's motivation in a discussion and identifying the different attitudes with which it is possible to make use of these (influence, accompaniment or manipulation), the authors define the role of the debate leader, who must «supply a framework (rules) which prevents participants from being manipulated and which implements reciprocal influences in order to encourage the accompaniment of the greatest number". They then propose a set of rules, which can be submitted to the participants of a "socio-cognitive" debate, which aims to encourage the learner "to abandon those conceptions which stand in the way of taking on a concept proposed by the teacher":

- **"everyone has good reasons to think what he thinks"** (the postulate of coherence which is the first rule) - 'good' meaning 'intersubjectively valid';
- **'his reasons are so good that they deserve to be presented to those present'** (2nd rule);
- **but in order to be sure that the arguments called up to defend an opinion are properly understood by the opponents, 'anyone with a different opinion is encouraged first to reformulate the development of the adversary's thesis'** (3rd rule)".

The debate leader chooses to be only a guide, responsible for making sure that the three rules are respected, thereby "encouraging the development of democratic know-how".

And also

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Teaching controversial issues: new stakes for the school

Over the last decade, the French educational system seems to have undergone a significant change: in the area of educational contents, new curricula claim the determination for school to be more open to the contemporary world, and include controversial issues; in the area of didactic forms, debating is encouraged in certain disciplines. In parallel with this, the fecundity of the topic of "teaching controversial issues" in the field of educational research bears witness, if not to the complete success of this ambition, at least to the interest it arouses in those involved in the educational system. And yet the teaching of controversial issues still runs up against limits in traditional classroom organisation.

Towards the limits of traditional classroom organisation

First of all, the way in which controversial issues are handled at school does not fit in very well with the discipline categories which, up until now provided a coherent framework for structuring knowledge, for graduating it throughout the curriculum, and transposing it into didactic terms for teachers, who are themselves the product of such an organisation of knowledge, and whose first training is as specialists in a discipline before becoming those who pass it on.

Controversial issues are not *a priori* "educational" issues, in the sense that they have nothing to do with theoretical, putative, cold, decontextualised "school questions" without anything really at stake. Quite the reverse: they are real, concrete, heated, contextual, temporal and pregnant with stakes for society.

Controversial issues are transverse and multi-factorial ones; they require cross-disciplinary handling, with light shed on them from a number of directions so as to understand them intelligibly and move towards a reasoned solution of them.

Even more: not only do controversial issues provoke what Jean Simonneaux calls "**disciplinary telescoping**", but they also

tend to make use of the newest, most unstable, most fragile, most rebellious regions – precisely those that are the most subject to controversy – of the different scientific and social fields they pass through. Teaching them requires accepted avenues to be abandoned so that the maze of developing knowledge can be entered, with its related batch of uncertainties and incompleteness.

Neither can the treatment of controversial issues be content with a lecture-style approach to teaching. On the contrary, it requires a multi-horizontal approach that explores, investigates, is curious and critical, confronting sources from a variety of origins and of different natures. It requires discussion and debate that is constructed, reasoned, is legitimate and enhanced. Individual research, work in small groups and finally classroom debate are the means of choice to bring the different issues to light and bring out “valid” positions that can be upheld to begin to solve them. All these resources involve the pupil in an active attitude, while the teacher can find himself in a more removed position if he takes on the formal management of the debate.

Finally, there is no “right” answer to controversial questions, and the evaluation of what the pupils learn cannot be measured in terms of the conformity of the answers, but much more in the relevance of the approaches implemented and the pupils’ ability to call previous knowledge into question

And also

- Audigier François (2001). « Les contenus d’enseignement plus que jamais en question ». In C. Gohier & S. Laurin (dir.). *Entre culture, compétence et contenu : La formation fondamentale, un espace à redéfinir*. Outremont : Éditions logiques.
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New aims

New aims, because teaching controversial issues invites one to redefine the educational project in schools. A suitcase full of stable and irrefutable knowledge held together by a civic, Republican morality is no longer a valid passport for preparing young people to succeed in their adult life in an increasingly complex society. Controversial issues, on the contrary, suggest the more ambitious project of training alert, well-informed individuals who are critical of a plethora of information, curious and yet aware of the world’s issues, making responsible choices and taking consequent action.

At the very heart of controversial issues is the reference to values. The epistemological value of the “teachable” knowledge, that they lead one to question again the value of the “true” and the “just” in assessing an argument; ethical values, which give depth to questioning.

It is here that teaching socially controversial issues meets with the new-generation educational projects of the type “educating for”, with which it shares questions (environment and sustainable development, citizenship, relation between the sexes, etc.), in keeping with contemporary problems in society. All share an educational ambition which is to be found in the enlightened conjugation of knowledge and values, skills and forms of behaviour abilities and responsibilities.

Finally, with education for democratic citizenship, teaching shares a fundamental approach: the implementation in the classroom of the principles of participatory democracy.

New challenges

That school has recently been able to find room for controversial issues is because it is pursuing the makeover of its educational project and its classroom organisation. New formulations of objectives have appeared in official texts, which justify the introduction of new topics in the field of teaching; cross-discipline teaching, investigation, group work, discussion, and debating are all recommended to encourage learning. This makeover is, for example, a good illustration of the recent texts pertaining to the common core of knowledge and skills.

But in the move from what is written to what is done there remains the difficulty of really getting practices to change. The question of knowing how to transform teaching without also giving teacher training a makeover is an urgent one. How can we provide added-value for multi-disciplinary initial and in-service training? How can we mobilise cross-discipline team work? How can we make the “risk of teaching” attractive within an educational community that is both saturated with change and frustrated by immobility?

New challenges too because a true citizen education project whose perspective includes controversial issues, will sooner or later lead the institution involved to assume responsibility for the unexpected: no true attempt to provide democratic citizen education could be a success without implementing – on the grounds of pedagogical exemplarity – a truly democratic means of functioning with the school institution. For the school, would this then be what we might call “the risk of educating”?

New stakes: a living, vital link between school and society

New stakes for school, for while controversial issues come from society, they are destined to return to it enriched by the learning they have fertilised in the minds of pupils and teachers, who are also citizens of the same society, each with a share of responsibility for questions about the world of today and the world of tomorrow.

While there is indeed a crisis in the relationship between school and society, one of the factors put forward is the lack of “porosity” between these two worlds and their respective knowledge universes. Because he works precisely on the “dialectics of import / export”, or in other words the reciprocal mediation between social and educational knowledge, the teacher of controversial issues is potentially a powerful medium for remedying this crisis, by forging a new, living, link between society and school.

Even better, controversial issues can give back an often-lacking meaning to school learning and in so doing provide real motivation for the pupils. Ultimately, this revitalisation of teaching can profoundly transform the relationship pupils have with school. School as a place which is aware of, and attempts to understand the complexities of the contemporary world; school

as an indispensable, vital place for developing the learning of "real" life subjects; school as a collective and democratic area in which the benefits prevail over the "risk of learning".

Through controversial issues, a vital breath of new air is blowing into schools. It's up to everyone involved to come to grips with it!

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