

while American policies target the vast majority of women, this approach is unnecessary and potentially neglects the populations most adversely affected by prenatal drinking.

In chapters 6 and 7 Armstrong examines the conditions by which this misguided focus emerged within the United States. She concludes that at the heart of American understandings of FAS and the relationship between alcohol and offspring is a larger latent agenda predicated on the preservation of a particular social order and set of institutionalized gender roles and relationships; a denial of collective social responsibility for future generations through the individualizing of blame; dismissal of the role of social inequalities in women's lives; marginalization of the associated risks of maternal drinking and the social suffering that underlies it; and a displacement of risk and responsibility that effectively ignores the societal burden generated by men's drinking, which is vastly greater than that caused by women's drinking. The conflation of risk with immorality provides the conditions for this agenda despite significant medical uncertainty and ambiguity; it is also reflected in the equating of prenatal alcohol exposure with child abuse and evident in American policy responses to FAS that are typically punitive rather than preventative.

Armstrong's analysis provides important insight into questions of risk and responsibility that have direct implications for policy makers. While I would like to believe that her analysis and the direction she lays out for public policy in her final chapter will be a catalyst to mobilize more appropriate supports for women and their children, I see little within American medical or social landscapes to think that this will happen. Policy makers in the United States and North America more generally have invested highly in an individualized approach to FAS prevention as it presents the illusion that broad-based public policies can effectively mobilize action to prevent and treat the physical disorder of FAS. Unfortunately, as Armstrong so convincingly articulates, "this individualized approach ... will never cure either the individual cases of FAS or the social disorder that is at the root of the syndrome" (p. 219).

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BELHOSTE, Bruno — *La Formation d'une technocratie : l'École polytechnique et ses élèves de la Révolution au Second Empire*, Paris, Belin, 2003, 508 p.

In 1848 Victor Hugo saw the *École polytechnique* as a part — along with the *Institut* and the Legion of Honour — of a Holy Trinity of institutions that were as inseparable from the idea of republican France as the tricolour flag. From its foundation in 1794, the school has enjoyed immense prestige and its graduates have populated the upper reaches of the technical administrations of the state, both military and civilian. It naturally attracted impassioned defenders and attackers, and its first history was written as early as 1828 by Ambroise Fourcy. Many of the histories incorporated an agenda of either praising or denigrating the school, and only in the twentieth century

has a more professional historical approach appeared. Bruno Belhoste's book is the latest, the most complete, and the best. Indeed, it will remain the definitive work on the subject, not only because of the author's fine handling of the subject matter, but also, according to Belhoste, because the famous school has no future. It is "too little, too French, too military". Its system of competitive examinations (the *concours*) and its privileged access to the public administrative sector are doomed and, although it might be too hard to abolish a name so glorious, it attained what was essentially its final form at the end of the Second Empire (hence the chronological limit of the book). This form, which remained solid for most of the following century, is now dissolving. The time has truly come to write its history.

Belhoste has devoted more than 20 years to his subject and brings many valuable qualifications to his work. He is a historian of mathematics (the author of a fine book on the great mathematician and polytechnician Augustin-Louis Cauchy), a historian of education, and a competent social historian to boot. All these qualities are necessary to do justice to the history of an institution that was closely associated with some of the best scientists of nineteenth-century Europe, particularly mathematicians; that served as a template for the French system of the *grandes écoles*; and that was central to the formation of elites in modern France.

The book is divided into three parts. The first, on the development of the galaxy of institutions in which the school appeared and evolved, goes beyond a narrow look at the school to consider the system of military technical schools of the Old Regime and their successors — the *écoles d'application* (the Military Engineering and Artillery School, the School of Roads and Bridges, the School of Mines, among others) that emerged after the Revolution and achieved a certain unity, if not homogeneity, by being required to recruit their students exclusively from the *Polytechnique*. The school also stood between an elaborate system of public and private feeder schools upstream and the specialized technical schools downstream. The second part of the book examines course content, curriculum, and the ways in which the curriculum reflected the social and cultural pressures on the school by the technocracy that it nurtured and served. Belhoste deliberately uses the anachronistic American neologism "technocracy" in his title to emphasize the school's dominant role in creating a new social configuration and mentality that gradually came to be accepted by the dominant elites of France near the end of the Second Empire.

The first decades of the *École polytechnique's* history saw a stupendous flourishing of mathematical talent in France. Lagrange and Laplace (professor and examiner respectively) found worthy successors in Fourier, Poisson, Cauchy, Ampère, Poincaré, and other graduates of the school. Indeed, mathematics dominated the school's curriculum to the extent that it was accused of being an *école monoteknique* instead of *polytechnique*. Moreover, the mathematics was heavily concentrated on abstract analysis. Descriptive geometry, developed by the school's initial driving spirit, the mathematician Gaspard Monge, gradually receded to a secondary position. Monge's vision of descriptive geometry as a mathematical descriptive language that would be a tool for the researcher and the artisan, with multiple practical applications, gave way to analysis perceived as an admirable culture of the mind as much as a useful

tool in mechanics. This is, to some extent, a simplification, and Belhoste is aware of all its nuances and does a good job in giving us the complete story.

The final section deals with the students, detailing their social origins, the cult of meritocracy that grew out of the *concours*, the conditioning of bodies and minds in its military boarding school regime after 1804, the students' involvement in the revolutions of 1830 and 1848, and the ever more prestigious image of the polytechnician that developed during the nineteenth century. Here Belhoste carefully sifts the spotty evidence of earlier historians to conclude that the *Polytechnique* drew its students from the middle and lower ranks of the bourgeoisie, the sons of professionals and government employees, both military and civilian. The offspring of the dominant classes in French society (the *notables*) were in a minority, and offspring of the lower labouring classes were virtually absent. The students' reputation for radicalism was overblown: on the whole, polytechnicians tended to favour order, preferably republican, and faithfully to serve the state.

In the immediate aftermath of the exalted Jacobin dictatorship when the school was founded, professors like Monge espoused an ideal of democratizing science and technology and of putting theoretical science at the service of talented artisans to supplement the practical knowledge that they would acquire on the job. In no more than a year, this ideal evaporated, in part because of a certain idealistic fuzziness in its conception and in part because of the pressures of the military technical schools attempting to reassert themselves after their eclipse during the Revolution. Instead of a school intimately tied to the productive elements of society, the *Polytechnique* became a school of technocrats who believed in the primacy of abstract theoretical knowledge, not only for its potential social cachet, but also because of the belief that technical expertise was a product of the application of theory to practice by the formally educated engineer. The eminent scientists at the school supported this view as well because it gave science a key role of mediation and attracted support from the state technical bureaucracy, especially the military. The survival and growing prestige of the school that this external support brought came at a price. The needs of the technocracy became ever more insistent, to the detriment of science. By the 1850s the centre of gravity of original scientific research had passed from the school to institutions like the *École normale supérieure* and the University, in spite of the school's remarkable quality of theoretical instruction and improved practical instruction.

The 1850s also saw the implementation of the Le Verrier reforms. The school was firmly bound to the specialized application schools with some decline of analysis and the strengthening of more practical subjects. Nominally this development marked a return to the ideals of Monge, but the school nevertheless retained a strong emphasis on theory, as much for its role in giving social legitimacy to technocracy as for its methodical and systematic approach to practical problems. In the half century since the school's foundation, its technocratic ideals, once kept at arm's length by dominant elites, had come to be accepted and admired, impregnating the state bureaucracy. Its scientific dominance, however, had passed. The story that Belhoste tells so well about this complex and fascinating phenomenon is not only essential for the

understanding of modern France, but gives insights into the technocratic ethos of all modern societies.

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BLATTBERG, Charles — *Shall We Dance? A Patriotic Politics for Canada*. Montreal and Kingston: McGill-Queen's University Press, 2003. Pp. 196.

Charles Blattberg begins from the premise that Canadians are homesick, that we are unable to feel at home in our own country (p. 6). From this premise he proceeds to outline the reasons behind our alienation and to propose a way of moving forward to a political culture rooted in a shared conversation and a common citizenship, "a citizenship of we" (p. 37).

Blattberg believes that Canadian political dialogue is flawed: it is either monarchist or polyarchist. "According to monarchists, justice demands that there be a single sovereign authority to which all those involved in the most important political conflicts must appeal, doing so by pleading their cases to that authority" (p. 10). Blattberg identifies this approach to conflict resolution with Pierre Trudeau and the *Charter of Rights and Freedoms*. According to Blattberg, it is misguided to think in terms of a single sovereign authority in a constitution based on the Crown and the people and in a society with competing values. Moreover, the act of pleading is not really dialogue at all: it is monologue at best, a shouting match at worst, and there is no promise of transformation on the part of participants. Meanwhile, the polyarchist approach to politics and political conflict has the advantage of recognizing that "there are just too many incompatible visions of justice in the world for any one of them to be granted absolute sovereign authority" (p. 16). In addition, negotiation is at the heart of the polyarchist approach to politics. If better than pleading, however, negotiation is adversarial in nature and "only confirms the divisions" in society when what is required is an acknowledgement of what values and goals citizens share (p. 34). Like pleading, negotiation fails to transform participants because it "only works when people's backs are up against the wall, and no one likes having his back up against the wall" (p. 85).

Between pleading on one hand and negotiation on the other, Blattberg proposes conversation as the best means to resolve political conflict. Unlike pleading, in which the winner takes all, and negotiation, in which both parties must put water in their wine, conversation assumes a willingness to listen and an openness to transformation. It promises reconciliation.

And just as good dancing is not a matter of two separate beings coordinating each other's independent movements, successful conversation does not arise from the exchange of information between wholly separate interlocutors, for the aim is always to express something meaningful *together*, which is to say, to be in harmony with, to share in common, something that matters, something that they believe is at least partly constitutive of