Under construction, building contractors in nineteenth century Belgium

I. Bertels[1,2,3], K. Verswijver[1] & I. Wouters[1]
[1]*Department of Architectural Engineering, Faculty of Engineering, Vrije Universiteit Brussel, Belgium*
[2]*Department of Art History and Archaeology, Faculty of Arts and Philosophy, Vrije Universiteit Brussel, Belgium*
[3]*Department of History and Archaeology, Faculty of Humanities, Universiteit Antwerpen, Belgium*

Abstract

Public works contractors constitute a vital link in the public building process. The search for the best contractor, from a qualitative and/or economical perspective, became a quest for several clients and designers in the course of the nineteenth century. This paper examines how part of this specific group of 'builders', those who were active in public works, can be defined, in both quantitative and qualitative terms within the Belgian context. What potentiality of public work contractors was available? How did these contractors relate to other professions within the building industry? And how did they participate in the redefinition and (re)positioning of the roles of 'architect', 'engineer', 'contractor', and 'craftsman'? Starting from previous research on the Antwerp public works, we will define, position and follow the evolution of nineteenth century building contractors in its Belgian and broader context. Our paper is based on concrete cases such as individual public buildings and infrastructure, specifications, tenders, contracts, disputes and legal business, mostly conserved in Public Archives and the recently discovered private archive of the *Cercle des Entrepreneurs de Travaux public*s.
Keywords: Belgium, nineteenth century, public works, contractors, professionalization process.

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1 Introduction

Public works contractors constitute a vital link in the public building process. The search for the best contractor, from a qualitative and/or economical perspective, became a quest for several clients and designers in the course of the nineteenth century. Opposition voices – from contractors, craftsmen or material suppliers – have limited presence within (architectural) historiography. However, it is within a dialectical process with related professions, including architects and engineers, that contractors gradually obtained strictly defined positions and job responsibilities. For this growing group of contractors the nineteenth century became an important lynchpin between traditional organizations, namely, guilds and trades, and modern building organization. This paper examines how part of this specific group of 'builders' – those who were active in public works – can be defined. What potentiality of public work contractors was available? How did these contractors relate to other professions within the building industry? And how did they participate in the redefinition and (re-) positioning of the roles of 'architect', 'engineer', 'contractor', and 'craftsman'?

To investigate the Belgian situation an analysis of both quantifiable sources, – including the patent taxes and commercial almanacs or directories -, and qualitative sources – including building specifications, tenders, contracts, disputes, and legal transactions as well as records of education and professional organizations – is made. Based on this analysis, this paper is structured via elementary aspects of professionalization (literally 'to make a business'), such as the contractors' professional juridical position, their search for appropriate applied training, and their professional networking. For these aspects there exists a general consensus among historians that they are decisive elements in the professionalization process of related professional groups [1].

2 Definition and legal context

One of the vexing questions is how to label 'public building contractor' in Belgium and to question how they correspond to or differ from professional typologies, such as those drafted by E.W. Cooney in his article *The origins of the Victorian Master Builders* and by Sara E. Wermiel for her profile of the general American contractor? Cooney identifies four types of building firms and traces their historical evidence to the Victorian era: Type 1. Master draftsman, e.g. carpenter, mason, bricklayer, undertaking work only in his own trade and usually employing only small numbers of journeymen and apprentices. Type 2. Master craftsman, undertaking responsibility for construction of all parts of buildings, but employing directly only workers in his own trade, and contracting with other master craftsmen for the reminder of work. Type 3. Builder, not a craftsman, but often an architect or a merchant, such as a timber merchant, erecting complete buildings on the basis of contracts with master craftsmen in the various trades. Type 4. Master builder, erecting complete buildings and employing more or less permanently a relatively large body of labourers and workmen in all the principal building crafts [2]. Cooney's third type of

contractor, the 'builder', basically overlaps with Sara E. Wermiel's profile of the American general contractor. In the United States, Wermiel notes, 'the term [general contractor] was first used to describe businesses engaged in engineering and public works and later was applied to builders who took whole contractors' [3]. Wermiel situates the rise of the general contractor in the United States to the 1870s [4]. In contrast, general contractors in Great Britain arose at the end of the eighteenth century and were well-known by the beginning of the nineteenth century. A trendsetter position is attributed to the Victorian builder Thomas Cubitt (1788–1855) [5]. Cubitt, having trained as a carpenter, developed a 'master builders' or 'contractors' practice' between 1815 and 1820. He initially subcontracted tradesmen in non-carpentry related branches. He later employed tradesmen directly, whereupon his firm developed to atypical sizes of over 700 employees. As 'regular' master builder organizations of the time generally retained five to thirty employees, Cubitt's firm was highly exceptional. But other firms would soon follow [6].

In Belgium, the main legal source, the *Code Civil* or *Code Napoléon* (1804), offered no proper distinction between 'architect' and 'contractors', and related articles mention *architecte et entrepreneur* or *architecte ou entrepreneur* [7]. Indeed in practice, most building contractors were self-employed and there was limited distinction in practice between architects and contractors. Moreover, economic organizations for contractors (and other trades) were dispensed by the French Le Chapelier Law of 1791 and extended to Belgium in 1795 [8]. Although the fact that with the Belgium's independence in 1830, these associations became legal, trade unions remained prohibited until 1866. As a consequence of their inheritance, the first professional organizations of this period were restricted from focusing on formal professional organisation. They instead developed charitable activities and health provisions and devoted time to providing services for the (religious) education and recreation of their members [9]. During the nineteenth century, the construction industry strongly developed, as is clearly evident in the organization of municipal public works. At the beginning of the century in Belgium, these municipal services only regulated design and building control. Construction work itself was rarely done in-house by craftsmen employed directly by the public works service. Such work was generally outsourced to the private sector by putting it out to tender. Additionally, the fiscal requirement for the government to minimize the costs of such provisions made it necessary to standardize the process of work organization. Needless to say, this would have consequences for hierarchies in the construction industry. From the start, the transfer (from public works to the contractor) of the organization of on-site construction stimulated the creation of the so-called *general construction firms* or *entrepreneur général*. Henceforth, building contractors had more opportunities to participate in on-site decision-making. At the end of the nineteenth century, the *Pandectes Belges*, an encyclopaedia of Belgian legislation, clarified the evolution of the changing role of building contractors. Whereas the architect remained the initiator of design and, moreover, retained ultimate authority for the work undertaken, the contractor increasingly held overall responsibility for the work's organization

and execution [10]. Apart from national legislation, additional local regulations were developed by local public administrations and entered into the *conditions générales* (general clauses, *algemene voorwaarden*) of building specifications (*cahier de charges, bestek*). These sources contain information on additional qualifications for public work contractors. Within the period under consideration, for one of the major Belgian city's as Antwerp the most important qualifications were a surety (*caution, borg*), competences/capability, and a registered (office) address in Antwerp [11]. A clear legal national regulation would not be established until the 1930s and 1940s (architects law 1939, contractors law 1947).

3 Educational profile

During the second half of the nineteenth century, the work of contractors became characterized by increasing complexity. New contexts required coordination of on-site work and enhanced diversity of necessary tasks. The transition of artisan-builders into general contractors and subcontractors required that contractors develop an increasing familiarity with multiple skills, ranging from craftsman and supplier to organizer, co-ordinator or negotiator. The need for an upgraded and more focused process of training became a higher priority. But it can be taken for granted that many contractors continued to be trained on-the-job as craftsmen [12]. A closer look at the training of contractors in Antwerp shows that many contractors undertook multiple and diverse training regimes. Some contractors trained formally as architects or engineers. Others received craft-training but completed their training through evening classes at local drawing schools.

The Antwerp Royal Academy of Fine Arts (1663) experienced, as did other academies, an important flow of students working towards professions in the building sector [13]. Numerical data for the period 1854–1863 clearly demonstrates this: 34% of the students (456 students of 1318 total) focussed on the building industry. Of this 34%, only 9% (41 students) began careers as architects or designers. Yet 70% (317 students) became employed as joiners or carpenters, 14% (66 students) as stonecutters and marble workers, and 7% (32 students) as plasterers [14]. Nineteenth-century academic education, notwithstanding clear indications of diversification and requests for more applied technical education, continued to follow the tradition of the French *Ecole des Beaux-Arts* (artistic education). The programme consisted mainly of theoretical courses and drawing ateliers, which supplemented the practical skills acquired in the atelier or at the building site. Hence, theory and practice remained strictly divided. The Antwerp academy, in reaction to socio-economical evolutions also started implementation of a more applied programme. A series of reforms followed [15]. From 1851 onwards, the training program offered a course in applied industrial drawing (*une classe d'architecture et de dessin appliqué aux arts et metiers*). But despite this introduction, the well-established programme of formal drawing education was still considered the broadest and strongest element in the Academy's portfolio [16].

The economic and social transformation of nineteenth-century Europe, far from simply broadening the content of existing training provisions, also spurred further development and experiments in vocational training. An example was a new type of education, called *technical education*. This label covered various educational programmes that trained manual workers in a range of sectors, including agriculture, domestic trades, and industry [17]. The evolution of this technical education in Belgium has been examined primarily over its pedagogical aspects [18]. As the variety of educational systems is best seen on the local level, this subchapter specifically focuses on the Antwerp situation within its broader national context.

Existing studies demonstrate the connection between accelerating industrial development and the subsequent rise of technical schools. Such faculties were first developed in rapidly developing and industrialized areas, including Liège (1838), Ghent (1838), Huy (1838), Verviers (1841), and Charlerloi (1845). They were allied to specialized regional industries, such as the textile industry in Ghent or the mining industry in Mons [19]. Multiple technical schools also provided theoretical and technical education for craftsmen in the building industry. By the end of the nineteenth century, 40 such industrial schools (*Nijverheidsscholen*) existed in Belgium. Nearly half (18 of 40) were in the Hainaut province; the rest were mostly spread throughout the major cities of the Belgian provinces [20]. Judging by their rapid increase in number, such industrial training schools clearly served the needs of the majority in providing affordable 'non-classical' training. The industrial schools supplied technical training of a primarily theoretical nature for an essentially artisan clientele. This training was regarded as a supplement to the practical experience of the individual worker or craftsman. Such training was thus marketed as a way for students to rise within the professional hierarchy, 'to move up from workman to the status of master or contractor' [21], perhaps to positions within 'middle-management'. Consequently, the schools' main responsibilities in the building industry became the practical organization of construction works and the translation of broader design concepts (originating from patrons, architects, or engineers) into concrete and practical tasks for their workforce [22].

In Antwerp, a private industrial school was established in 1862. This school provided a predominantly theoretical education that specifically included training employees of the building industry. It was founded between 1860 and 1861 as a school for ornamental and architectural design, but developed from its original designation to an industrial school in 1862 [23]. The school was opened as a private initiative. Such inception was rather exceptional, as most other industrial schools had originated in initiatives undertaken by municipal government. In order to fit the needs of local employers, the industrial school provided evening and weekend courses. Its remit was straightforward: 'aiming at the diffusion of scientific and industrial knowledge and to create the opportunity for everyone to qualify oneself in his professional discipline' [24]. In providing supplementary technical training to eligible practising craftsmen, primarily male students who were literate and over age 15, the institute offered a broad technical education for many prospective students. Students could attend courses on history, arithmetic,

algebra, and bookkeeping on weekday evenings; and on construction, mechanics, and industrial drawing courses on Sunday. In a notable departure from general practice, the courses were exclusively taught in the students' mother tongue (Flemish or 'Vlaamsch'). Antwerp's private institution not only filled a gap in the market for skilled labour but also reacted against the government-sponsored training at the Antwerp Academy and Athenaeum, training which was always undertaken in French. The industrial school enjoyed popularity quite quickly. Yet the school became a victim of its own success. Its rapidly increasing enrolments and escalating costs of provision forced its private investors to bequest the school to the city of Antwerp in 1866 [25]. The institution became part of a larger, pre-existing public educational network organized by the City of Antwerp, a network that included nursery, primary, and secondary schools, as well as further and higher education [26]. Following international examples (Bavaria, Saxony, Coburg, and Hessen-Darmstadt), the Antwerp program enhanced both its theoretical technical training and its structure, enabling improved practical expertise. Design, both artistic and scientific, was seen as 'an alphabet that each worker or craftsmen needed to know' [27] and was obligatory for every student irrespective of their chosen specializations. Whereas drawing was conceived as the practical part of the training, the theoretical part consisted of several scientific disciplines, ranging from mathematics and physics, through related disciplines of algebra and geometry, mechanics, and chemistry, to the domain of social science. Thus, in addition to the study of architecture and construction, such disciplines as accounting, politics, and legislation were also included. Furthermore, this holistic theoretical training related specifically to the individual industry the students were currently working within.

Besides, the industrial school, also a Sint-Lucasschool was established in 1877. However, this corporative inspired educational programmes resonated only weakly within the Antwerp urban context and the school never became as successful as its sister organizations in Ghent, Doornik, Liège, Brussels or Kortrijk. The programme provided a finishing school for artisanal professions. Here as well, drawing was taught as preparation for manual artisanal practice, and this stemmed from a strong corporatist ideal. In practice, courses were held on Sunday mornings and included one hour of theory and two hours of drawing classes [28].

Along with the industrial schools, another form of technical education was also developed: vocational training. Vocational schools primarily or exclusively provided practical training and their programs aimed to counter the shortage of practical training available on-site. In most cases, their programs were organized during the day. Further, unlike the vocational training, the engineers' and architects' training most often gave direct access to a particular profession [29]. The program at the industrial school, however, provided craftsmen and contractors with an additional theoretical training, itself a means to social and professional mobility. Together with the establishment of their proper professional organization, the provision of an appropriate training for contractors, as provided in the industrial school, strongly supported contractors' professionalization throughout the nineteenth century.

4 Networking

Even under such improved educational conditions, contractors still faced profound difficulties. Cooperation between local government officers, city architects, and engineers was far from ideal. Moreover, contractors remained shackled by a bureaucracy generated from previous legal requirements. Another direct result of this growing polarization between architects and supervisors, on the one hand, and contractors and craftsmen, on the other, was a growing need for a proper professional organization that would defend the common interests of the latter group. This evolution is also noticed on the international level, although at different rhythms.

In London, where general contracting was firmly established by the 1830s, organizational creation likewise emerged with the establishment of the Builders' Society (1830s) and the later London Master Builders' Association [30]. In the Netherlands, however, contractors underwent a professionalization process similar to Belgium's, although over a decade later. Only in 1895 did contractors organize themselves into the *Nederlandsche Aannemersbond* (NAB) or 'Dutch Contractors Federation', with *De Aannemer* as mouthpiece [31]. Local contractors' associations had been established earlier, including in Amsterdam around 1886 [32] and most likely in other major Dutch cities [33].

In Belgium, a pioneering role would be played by *Le Cercle des Entrepreneurs de Travaux Publices* or *Maatschappij van de verschillige ambachten en bouwstielen,* founded in Antwerp in September 1874. In 1881, this Antwerp union, along with the equivalent unions in other Belgian provinces, decided to establish a Belgian-wide confederation of contractors. The union's goals, succinctly formulated in the third article of its bylaws, were threefold: to create and maintain a professional position and standards; to establish clear customer-contractor obligations, such as specifications and tariffs, and this in concert with the public administrations; and to support the contractors' knowledge and education [34]. International congresses (*Congrès international des entrepreneurs*) were organized beginning from the first year (1881). From 1921, social and financial services were organized separately. In 1922, the first volume of the journal *Het Bouwbedrijf* was published. This journal became the mouthpiece for the association and its members. In 1929 a separate journal, *Het Vakbelang*, was released, addressing the employees in the building industry. Besides, other central items included protection of professional standards and the legal position and recognition of contractors (finally obtained in 1947), elements remaining crucial in their current policy [35].

5 Interaction and growing polarisation

In general, along with the establishment of specialized technical training, contractors organizations constitute important developments in the professionalization and modernization of Antwerp public contractors. Yet it must be recognized that the *entrepreneurs des travaux publics* remained, within the course of the nineteenth century, a diverse and evolving group of actors in the

public building industry. Their essential relations and interactions with the public administration very much determined their juridical and commercial status, and influenced their social organization. Under the motto 'union is strength' professional organizations tried to counterbalance the near absolute power of the authorities by defending their common professional interests.

Yet not everyone lauded the growing power of contractors. In the last quarter of the nineteenth century, many architects were highly critical of the role of general contractors. In 1879, Ernest Allard (1849-1898) in Belgium's leading architectural periodical *L'Emulation* strongly criticized the 'bewildering' variety of nineteenth-century Belgian building contractors [36]. For Allard and many others, the increasing application of the technique of general public tenders was 'the root of all evil', whereby quality was compromised for economical efficiency and rational organization. There were passionate appeals, from diverse perspectives and in which the Saint-Luc's Schools played an important role [37]. In such opposing views, the general contractor was seen as an economic aggressor elbowing himself into a position between architect and craftsmen.

The rise of general public work contractors also faced criticism in other countries. For instance in the Netherlands, the Amsterdam architect A.W. Weissman, regarded the contractor as a villain responsible for the degradation of the trades and arts [38]. Yet in the course of the nineteenth century public works were increasingly put out to tender, thus exacerbating polarization between the public works service and public contractors, between architects and contractors and leaded to the growing regulation of their interaction.

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