Thomas Schneider

A New History of the Beginnings of the German Archaeological Institute in Cairo, 1881–1929

Review of:

S. Voss, Die Geschichte der Abteilung Kairo des DAI im Spannungsfeld deutscher politischer Interessen 1881–1929. Menschen-Kulturen-Traditionen 8,1. Rahden/Westf.: Leidorf 2013. VIII und 270 Seiten. Zahlreiche Schwarzweiß-Abbildungen. Softcover. ISBN 978-3-86757-388-7.

The monograph under review is the first of two volumes that publish the results of a research project of the German Archaeological Institute in Cairo to scrutinize its history on the basis of their archival resources, commissioned to Susanne Voss. While the second volume is to comprise the history from 1929 to 1966, this first volume authored by Voss (in the following: V.) embraces the time of the German Empire and the Weimar Republic. It is based on archival materials of the German Institute itself, the Swiss Institute (Schweizerisches Institut für Ägyptische Bauforschung und Altertumskunde), as well as numerous archives in Germany. In particular, it relies on some 50,000 pages of administrative documents by Ludwig Borchardt and corresponding files at the German Ministry of Foreign Affairs and the Stiftung Preußischer Kulturbesitz in Berlin, as well as the correspondance that Borchardt entertained with his wife. In the introduction, V. starts with pointing to some ubiquitous misunderstandings in the academic literature that have perceived the imperial institute as a dependence of the German Archaeological Institute. Instead, it was an entirely private institute that became formally attached to the state institution only in 1929. At the same time, this common misperception of the institute and of Borchardt's (politically little significant) position of »special attaché« led to the false idea of seeing the institute as spearheading in Egypt a political and economic agenda of the German Reich. This can now be shown to be wrong; rather, the establishment of the institute was part of the fierce fight of Berlin Egyptology and its Egyptian dictionary project to secure academic superiority over the French. In pursuance of her institutional history, V. thus focuses not on the archaeological work of the

¹ For the later history, see also several contributions (C. von Pilgrim, Ludwig Borchardt und sein Institut für ägyptische Bauforschung und Altertumskunde in Kairo, 243–266; S. Voss, Der lange Arm des Nationalsozialismus. Zur Geschichte der Abteilung Kairo des DAI im »Dritten Reich«, 267–298; J. Budka/C. Jurman, Hermann Junker. Ein deutsch-österreichisches Forscherleben zwischen Pyramiden, Kreuz und Hakenkreuz, 299–331) in S. Bickel/H.-W. Fischer-Elfert/A. Loprieno/S. Richter (eds.), Ägyptologen und Ägyptologien zwischen Kaiserreich und Gründung der beiden deutschen Staaten. Zeitschrift für ägyptische Sprache und Altertumskunde, Beiheft 1 (Berlin 2013).

institute that has been well-described in earlier depoliticized accounts. Instead, she reflects on the criteria and processes of how decisions were reached, the interface of academics and politics, personal networks, and administrative mechanisms in the wider context of Prussian cultural politics.

Chapter II (»Egyptian antiquities as subject of international interest in the 19th century«, pp. 7-34) proceeds from an overview of the (lack) of interest in the Egyptian heritage before Mehmed Ali's rule and the political situation in Egypt between 1805 and 1882, to an analysis of specific national interests during the 19th century. In Egypt, the situation under Mehmed Ali was characterized by the deliberate destruction of entire monuments for the sake of factory building and the use of antiquities as >bargaining chips in exchange of European support. A first law of antiquities was issued in 1835 and a goal declared to establish a national collection under the direction of the Egyptian educator Rifa'a at-Tahtāwī; initial failure in this respect saw a new attempt to establish an Antiquities Service and Museum in the reign of Said Pasha. The appointment of August Mariette to the directorship of the Antiquities Service occurred in 1858 (followed by the opening of the Bulaq Museum in 1863); it was not until 1953 that the French would officially relinquish control of the Antiquities Service when Mostafa Amer was appointed its first Egyptian director. However, apart from the Service and the Museum, a school to train Egyptian Egyptologists was established under Ismail Pasha, directed by the leading German Egyptologist Heinrich Brugsch and on the Egyptian side, Ahmed Kamal. This highlights competing claims of the different European Egyptologies and their instrumentalization by the Egyptian government. In France (pp. 18-20)1, private interest in Egypt was predominant until the French defeat in the German-French war of 1870/1871, when the French state engaged in cultural diplomacy against the German empire as a means to defeat the Germans on the battlefield of academia. This included Egyptology and entailed the French directorate of the Antiquities Service, the establishment of a French archaeological institute in 1881, and the French directorship of the Egyptian museum (which found a definitive place in the newly built Egyptian National Museum, opened in 1902). The same raison d'être would be used after the First World War by Kurt Sethe, who saw it as a responsibility of Egyptology, after Germany had been defeated militarily, to »uphold in our field Germany's honour in the struggle of nations« (K. Sethe, Die Ägyptologie. Zweck, Inhalt und Bedeutung dieser Wissenschaft und Deutschlands Anteil an ihrer Entwicklung. Der Alte Orient 23, 1 [Leipzig 1921]). As opposed to the French situation where the state took a decided interest in Egyptology as a means to further national interests, the British (pp. 21-25) never perceived Egyptology as of significant public interest, even after their military

Instead of two unpublished manuscripts by Eric Gady to which V. refers for this section, see E. Gady, Egyptologues français et britanniques au XIXe siécle: Entre coopération scientifique et considérations patriotiques. In: S. Aprile/F. Bensimon (eds.), La France et l'Angleterre au XIXe siècle: échanges, représentations, comparaisons (Paris 2006) 471-488; E. Gady, Champollion, Ibrahim Pacha et Méhémet Ali: Aux sources de la protection des antiquités égyptiennes. In: J. C. Goyon/Ch. Cardin, Actes Du Neuvième Congrès International Des Égyptologues, Grenoble, 6-12 septembre 2004. Orientalia Lovaniensia analecta 150 (Leuven 2007) 767-776; E. Gady, Diplomaties culturelles britannique et française et égyptologie dans la première moitié du XXe siècle: un essai de comparaison. In: A. Dulphy/R. Frank/M.-A. Matrad-Bonucci/P. Ory (eds.), Les relations culturelles internationales au XXe siècle: De la diplomatie culturelle à l'acculturation (Bruxelles 2010) 31-38.

takeover of Egypt in 1882. The establishment of academic Egyptology in Great Britain lagged decades behind France, Germany and Italy; work in Egypt and the establishment of Egyptian archaeology as a discipline (W. M. F. Petrie) depended entirely on private foundations such as the Egypt Exploration Fund and the British School of Archaelogy in Egypt, none of which ever assumed the form of proper institutes in Egypt such as the French and German ones (see now D. Gange, Dialogues with the Dead: Egyptology in British Culture and Religion, 1822-1922 [Oxford 2013]). The situation was entirely different in the German states (German interest, pp. 25-34), at least in the first half of the 19th century. As a deliberate means to make the Kingdom of Prussia stand out in European cultural politics, Frederick William IV brought Egyptology to worldwide recognition with the Prussian expedition to Egypt under the leadership of Richard Lepsius (1842-1848), the creation of the first chair of Egyptology at Berlin in 1846, and the opening, in 1850, of one of the largest Egyptian collections in Berlin. This was in marked contrast with the absence of any German national interest in Egypt in the second half of the 19th century when Egyptology also remained marginal as an academic discipline at German universities. Lepsius' successor at Berlin, Adolf Erman, shared the state's disinterest in any engagement in Egypt itself and moulded Egyptian philology at Berlin into the »Berlin school«. In his stead, it was Georg Ebers, professor of Egyptology at Leipzig, who advocated for German excavations in Egypt, until Erman's appointment to the Berlin Academy of Arts and Sciences in 1894 and the well-advanced plans for a dictionary of the Egyptian language (the Wörterbuch) made it essential for Berlin to have a presence in Egypt and to collate Egyptian inscriptions.

Chapter III analyze the 25 years before the foundation of the Institute (1881-1906; pp. 35-113). Between 1881 and 1890, five requests by the Heidelberg Extraordinarius for Egyptology, August Eisenlohr, to establish a permanent German representation in Egypt were rejected by the Prussian ministry of culture and the Berlin Academy, out of personal antipathy, as well as the fear of interference in the academy's competencies and the British-French affairs in Cairo. Instead, the academy and the ministry opted in 1889 for a »central institution« exclusively in support of the royal collections, in particular the Berlin Museum and the Institute of Oriental Languages (of which Egyptology was a part). At that time, Erman had established himself as the undisputed beacon of a new, methodologically stringent Egyptology within the larger master plan of Prussian »Wissenschaft«, with the full support of the ministry and the academy. Using an existing provision to attach civil engineers to the royal missions abroad, Erman was able to suggest for that post his student Ludwig Borchardt who had the dual qualification of being a civil engineer and an Egyptologist. However, and while Borchardt embarked on organizing the cataloguing of the antiquities at the Cairo Museum, Erman himself deliberately subverted German Egyptological engagement in Egypt by requesting the state's support for the Wörterbuch project at the explict cost of archaeological work. The antagonism between the ambitions of Berlin and those of Borchardt would remain the determining factor of German activities in Cairo for the next 40 years, until the institute's attachment to the German Archaeological Institute in 1929. With the support of the British authorities, Borchardt was able to establish an international team for the Catalogue Général des Antiquités Égyptiennes in 1897 and also co-authored, with Friedrich Wilhelm Freiherr von Bissing, a detailed memorandum for restructuring the Egyptian Antiquities Service. Attempts to position Borchardt more prominently in the Service failed until 1905 when he was appointed to the Comité d'archéologie; at the very least, Erman reached Borchardt's attachment to the consular service in the fall of 1899, still in the context of affirming the reputation of German scholarship vis-à-vis France, Britain and the United States. Borchardt's status remained precarious: his position was not permanent, he was formally outside the German diplomatic corps, badly paid and with limited funds for the execution of his scholarly work, Erman strictly reglemented the remit of Borchardt's work, and he remained without official facilities, although supported by Georg Möller as his assistant from 1904–1907. He was able to camouflage this situation when he married Emilie (Mimi) Cohen in 1903 who came from a wealthy Jewish family at Frankfurt and facilitated Borchardt's social ascent.

A transformation of the situation of German Egyptology occurred with its first excavations on Egyptian soil between 1898 and 1908, aimed to catch up with systematic archaeological projects that had been initiated for Classical antiquity and Mesopotamia (Robert Koldewey). Borchardt's excavations at Abu Gurob and Abusir relied initially on private funding by Friedrich Wilhelm Freiherr von Bissing (1899-1901) and were then supported by Berlin businessman and philanthropist James Simon and the Deutsche Orient-Gesellschaft, increasingly impaired by tensions caused by diverging expectations and ambitions. Between 1901 and 1914, and in addition to his excavations, Borchardt, alongside Otto Rubensohn, assumed an important role in the systematic acquisition of Greek literary papyri for the »German papyrus cartel« established in 1902, negotiating the interests of the cartel, Berlin's claim for preferred treatment in all acquisitions, and the allocation to the different constituent parties. Most famously associated with Borchardt's name would be the excavation of Amarna (1911-1914) on behalf of the Deutsche Orient-Gesellschaft, despite the fact that Borchardt himself hardly participated in the fieldwork at all. The section in the monograph of most interest to a wider public is the one devoted to the circumstances of the find of the Nefertiti bust in the workshop of the sculptor Thutmose (pp. 95 f.). The documentation shows that the bust was actually found on December 5, 1912, but that the discovery was staged on December 6 for the official visit of Prince Johann Georg Duke of Saxony and his delegation. In this context, V. refutes the conspiracy theories according to which Borchardt would have had the bust forged, buried and retrieved for the sole purpose of that visit.² The question of the public display of the bust led to a lengthy conflict between Borchardt and Heinrich Schäfer, the new director of the Egyptian Museum in Berlin, between 1918 and 1924 (pp. 182-185). Borchardt could put off the display until 1924, a delay that was later used as an argument in the dispute about the circumstances of the partitioning of the Amarna finds.

A first climax of Borchardt's tireless work in Egypt, engineered in the background by Erman and justified once again as indispensable to the work of the Berlin Wörterbuch project, was the establishment of the first German House on the West Bank of Thebes (pp. 99-108) in 1904, designed by Borchardt himself and financed by the

The most recent attempt is that by H. Stierlin, Le Buste de Néfertiti, une imposture de l'égyptologie? (Gollion 2009) according to whom the bust was manufactured as a demonstration piece and then came to be considered genuine. Cf. also R. Krauss, Nefertiti's Final Secret. KMT Vol. 20, No. 2, Summer 2009, 18-28; F. Seyfried (ed.), Im Licht von Amarna - 100 Jahre Büste der Nofretete (Berlin 2012).

Emperor, on land put obligingly at its disposal by Gaston Maspero as Head of the Antiquities Service. It was the first scientific institution of German Egyptology in Egypt, and the first project of German archaeology in Egypt that received state funding since Lepsius' expedition 62 years earlier. 1906 saw finally the conversion of Borchardt's position into a tenured one, furthered by the fact that the German House at Thebes had become a budgetary obligation of the state, Erman's continuous efforts, and the intended appointment of Borchardt to the Vienna professorship in Egyptology. Borchardt rejected the Vienna offer and was in turn conferred the title of professor for his position in Cairo; while Borchardt's strictly personal advancement in Egypt had Erman's approval, he outright disapproved intentions to create in Egypt an independent institute under Borchardt's leadership. Yet, Borchardt was able to use the momentum, persuade the ministry to combine the Egyptian assests into an institute, and in August 1907, was appointed by the emperor to the directorship of the Imperial German Institute for the Study of Egyptian Antiquities in Cairo (Kaiserlich Deutsches Institut für ägyptische Altertumskunde in Kairo). In the summer of 1909, Borchardt bought a villa in Zamalek to house the Institute; this gave the Institute the appearance of a significant academic competitor of the much more powerful French Institute or the Antiquities Service while in reality the budget available was only a fraction of theirs.

The successful establishment of an institute (chapter IV. »The >Imperial German Institute for the Study of Egyptian Antiquities in Cairo ([1907–1929] «, pp. 115–237) meant a definitive rift in the relationship of Erman and Borchardt, visible in the lengthy negotiations about the future statutes and competencies of the new institute (pp. 116-120). Erman prevailed; the Wörterbuch and the Berlin Museum maintained overall control of the academic projects of the institute. Different assistants came and went until the outbreak of the First World War when the institute was locked and sealed on August 3, 1914; its last assistant Friedrich Rösch, enthusiastic to be deployed and to fight, died on the Western front only days after his return from Egypt. Borchardt's academic worldview, including much national resentment against French and British Egyptology, emerges from the 250-300 reports that Borchardt sent to Berlin between 1899 and 1914 (pp. 130-150: chapter IV.6 »Borchardt's reports to the Chancellor of the Reich and the Academic Committee for the edition of a dictionary of the Egyptian language, 1899-1914«). They display a clear sense of methodological superiority of German academia and the Berlin school (as well as its American representatives) over the French, in particular an outright hostility towards the French-led Antiquities Service, also fuelled by Borchardt's failed election to the Service's supervisory board in 1898. His reports kept criticizing the Service's involvement in the trade in antiquities and site destruction, the insuffcient training of local inspectors and failed preservation of monuments, as well as the organization of the Cairo Museum and regulations about the division of finds to the detriment of the Berlin Museum. Before tighter antiquities jurisdiction came into effect from 1922 onward, a part of Borchardt's work consisted in the systematic acquisition of antiquities for German collections; apart from reports about these acquisitions, Borchardt also produced detailed reports about the increase of forgeries. A special report in 1911 highlights the longstanding conflict between Borchardt and von Bissing (pp. 147-150), another of the rifts that increasingly alienated Borchardt from representatives of Egyptology in Germany.

The most serious national antagonism that impacted Borchardt's work in Egypt was the one between Germany and France, but it had its particular academic foundation in the opposition between traditional French Egyptology and the new methodology of the Berlin School (chapter IV.7 »The academic competition [1899–1914]«, pp. 150–164). Contempt of Prussian scholars (such as Schäfer and Borchardt) and ones educated in the Berlin School (Breasted) by Gaston Maspero was mirrored by Erman's disdain for the purportedly amateurish Maspero. A memorandum drafted by Erman for the Prussian Ministry of Culture in 1900 contrasts the scientific progress of (Germanic) Egyptology as visible since 1880 throughout Germany, the United States, Russia, Switzerland, the Netherlands and England with the unmethodological (Romanic) pursuit of the discipline as practised in France and Italy, of which Maspero is singled out as its figurehead. Borchardt followed suit and transferred the claim for methodological superiority also to the archaeological work done on Egyptian soil. The standards of education of Egyptologists were also paramount in Borchardt's relationship with the British while his own impolitic attitude, as well as his unlawful procurement of excavation documentation of foreign missions, almost led to his dismissal from his position in 1908. Instead of seeking the reason for Germany's marginal role within German diplomacy which kept obstructing his ambitions, Borchardt identified as the true cause the purportedly inimical intentions of the French and the British, the supposed anti-German attitude of Maspero and Lord Kitchener. Germany's marginal role became obvious with the succession to Emil Brugsch's - the only German within the Antiquities Service - curatorship at the Egyptian Museum, when the planned institution of Georg Steindorff was thwarted (pp. 156–161).

The »Final view on the role of the German Egyptological representation in Egypt in the context of German foreign politics between 1899 and 1914« (chapter IV.8, pp. 164– 167) re-emphasizes that there was no wider imperial agenda for the establishment of the institute and that it needs to be seen as an element of the contemporaneous academic controversy among European nations. Quite to the contrary, Bismarck used the bâton égyptien – the threat to intervene in Egypt and to disrupt the French-British equilibrium - until the Entente cordiale of 1904 between Great Britain and France meant an end to the German interest in Egypt, an interest that would only resume after Egypt's independence in 1922. While Borchardt himself perceived his work in Egypt as serving national interests, a national commitment that was welcome to the German diplomacy, both the support by emperor William II and Borchardt's attachment to the Consulate General must not be understood as reflecting an active engagement by the state in Egyptian affairs.

The First World War (chapter IV.9 »The outbreak of the First World War and the fate of the institute until 1923«, pp. 168-187) led to the withdrawal of German institutions from Egypt; it also entailed a long struggle to save the two houses of the Borchardts in Cairo (the institute and their private villa) that had been confiscated by the British military authorities and authorized for sale in 1921. Upon Borchardt's request, the Swiss Egyptologist Jean-Jacques Hess mustered international support and through a petition to British Foreign Secretary Lord Curzon in September 1921, signed by twelve Swiss university professors, indeed reached the restitution of the two possessions to Borchardt. By contrast, the German House at Thebes did not benefit from such a lucky fate and was pulled down in 1915 at the behest of the British Military Authorities. Germany also lost its excavation concessions and excavation houses at Amarna and Abusir; this section (pp. 177-182) also contains an intriguing exchange of letters between Gardiner and Erman that touches on academic and political perceptions (see also Th. L. Gertzen, The Anglo-Saxon Branch of the Berlin School: The Interwar Correspondence of Adolf Erman and Alan Gardiner and the Loss of the German Concession at Amarna. In: W. Carruthers (ed.), Histories of Egyptology: Interdisciplinary Measures [New York/Milton Park 2015] 34-49). It did not help the German interests that Borchardt had for some time already fallen out with his Berlin colleagues (Schäfer, Steindorff, Erman) and with many foreign Egyptologists in Egypt itself who would say that Borchardt had become an »anathema« in Egypt (pp. 185 ff.). Despite his fragile position, Borchardt could resume the directorship in October 1923, within a now formally independent Egyptian state.

In retrospective, the years of »Rebuilding and Restructuring after the War (1923-1925)« (chapter IV.10, pp. 187-203) and the »Resumption of institute business and academic activities (1923-1929)« (chapter IV.11, pp. 203-229) need to be seen in a different light. Substantial discord about the institute's direction dominated the years until Borchardt's retirement in 1928, and it appears consistent for an institution that did not grow beyond its inherent limitations - the tight control imposed by Berlin, the personal institution it represented to Borchardt - to be discontinued with his retirement. Georg Steindorff, in a communication to the Ministry of Foreign Affairs of 1923, had mounted a critique of Borchardt's pre-war directorship, requesting a new structure for the institute's governance, or else the closure of the institute that was seen as a luxury commodity for the impovered German state (and the needy discipline). Over the next two years, a controversial debate ensued about the institute's future governance, structure (including the assistantship) and bylaws. Ultimately, the Ministry could win through with the composition of a supervisory committee that was established in June 1925 (Georg Steindorff, Wilhelm Spiegelberg, Günter Roeder, Wilhelm Schubart, Hermann Ranke).

Borchardt's resumption of his work in Cairo was, contrary to his expectations, not negatively affected by the war, at least superficially - his letters report on the nature of the relationship with colleagues from different nations. Supported by his assistants (Scharff, Wolf, Anthes), he was allowed to carry out small-scale activities at Meidum, Saqqara, Giza, Abusir el-Meleq, Riqqah, Karnak and Luxor. This should not obscure the fact that the war had indeed produced a new political and academic situation both in Egypt and in Germany that affected the institute's operations in a most significant way. Borchardt was unsuccessful in regaining the excavation concession for Amarna that had gone to the Egypt Exploration Fund, a request exacerbated by accusations of unfair partitioning of the Amarna finds to secure the Nefertiti bust in 1913 and its concealment until 1923, long criticized by Schaefer. While the accusations pertaining to 1913 were refuted by the pro-European Egyptian government, the Egyptian Nationalists and their mouthpiece, the newspaper Al Ahram, instrumentalized the issue politically under the slogan »Egypt to the Egyptians!« German colleagues of Borchardt's followed suit (Walter Wreszinski, Borchardt's former assistant Rusch), as did the Egyptian Antiquities Service under Pierre Lacau who was as the Service's director an Egyptian civil servant, and the British. The new policy was to rectify past injustice in the partitioning of finds, and to implement a new antiquities law that left the decision about the distribution of finds entirely to the Antiquities Service. As a consequence of the new jurisdiction, W. M. F. Petrie decided in 1926 to abandon Egypt for the better excavation conditions in Palestine. However, the issue was also exacerbated by Borchardt's insistence on German academic superiority and his arrogance. He sharply rebuffed the Deutsche Orient-Gesellschaft in 1924 when the society reminded him to finally publish the excavations at Amarna that had come to a close ten years earlier. Borchardt was able to extort funding from the society for Herbert Ricke's work on the publication (1926-1928) although the final volume would not appear until 1980. A last success of Borchardt was the rebuilding and reopening (in 1927) of the German House in Thebes, funded by the Ministry of Foreign Affairs and private entrepreneur Aaron Hirsch. Borchardt took now often refuge in Thebes from the »intrigues of Cairo« (to which he had himself contributed!).

The final chapter before the Summary (chapter V., pp. 239-242) outlines the events leading to the integration of the institute in the German Archaeological Institute (chapter IV.12: »Succession and attachment to the German Archaeological Institute 1929«, pp. 229-237), a step intended and pursued (without Borchardt's consent) since 1927. Hermann Junker was proposed as the institute's director within the new institutional framework; a second position for an architectural historian (Bauforscher), as intended by Borchardt (who suggested Uvo Hölscher) was not realized. The institute became offically attached to the German Institute in 1929, and last attempts of Borchardt to discredit the facts established were to no avail. The final pages of the volume contain appendices (VI. »German diplomatic representations in Egypt until 1929«, p. 243; VII. »List of abbreviations«, p. 245; VIII. »List of sources«, pp. 247-9; IX. »Bibliography«, pp. 251–266; X. »Indices«, pp. 267–270; XI. »List of rights to photographs«, p. 271).

The narrative presented by V. demonstrates to what extent the history of the institute in its beginnings was marked by personal ambition and conflict, as well as the competition among national traditions of scholarship, and that the institute at no time was an active instrument of German political engagement in Egypt. In that context, the volume would have benefitted from a chapter outlining the German system of universities and academies in the period in question, and to elaborate on the frequently alluded to wider framework of »Großwissenschaft« (Big Science, or rather »large academia«. – See also T. Kahlert, ›Große Projekte«: Mommsens Traum und der Diskurs um Big Science und Großforschung. In: H. Müller/F. Eßer [ed.], Wissenskulturen: Bedingungen wissenschaftlicher Innovation. Studien des Aachener Kompetenzzentrums für Wissenschaftsgeschichte 12 [Kassel 2012] 67-86). V's book is also an instructive example of how microhistory (the history of Borchardt's institute) is affected by the macrohistory of institutions and states, some of which powerfully symbolized by objects such as the Nefertiti bust and the German House in Thebes. Susanne Voss is to be commended on this extensively researched, remarkably detailed and well-presented volume.

Thomas Schneider

Department of Classical, Near Eastern and Religious Studies, University of British Columbia, Buchanan C, 1866 Main Mall, Vancouver V6T 1Z1, B.C., Canada thomas.schneider@ubc.ca