

# The John Sebastian Helmcken Medical Collection: The Material History of a Nineteenth-Century Medical Practitioner's Armamentarium

DAVID FARRELL

## Résumé

*Cet article recommande que les musées à collections historiques mettent en pratique les méthodologies établies en histoire de la culture matérielle. Partant de l'exemple de la collection médicale John Sebastian Helmcken, une collection d'instruments médicaux du XIX<sup>e</sup> siècle provenant d'un site historique de Victoria (Colombie-Britannique), l'auteur illustre la façon dont l'information tirée des objets façonnés peut être utile à l'interprétation. De plus, cette analyse d'objets façonnés démontre qu'une collection d'articles rassemblés par quelqu'un dans le passé peut être analysée à l'aide des mêmes méthodes établies en histoire de la culture matérielle que celles qui servent à l'étude d'objets façonnés distincts.*

## Abstract

*This article proposes that museums with history collections practise material history methodologies. Using the example of the John Sebastian Helmcken Medical Collection – a collection of nineteenth-century medical instruments from a historic site in Victoria, British Columbia – the author illustrates how information abstracted from artifacts can be useful for interpretation. Further, this artifact analysis demonstrates how an assemblage of objects created by someone in the past can be analyzed using the same material history methodologies developed for single artifacts.*

Previous studies that have incorporated material history or material culture methodologies to explore their subject have often made use of artifacts from the collections of history museums. Both the problems and the potential of museum collections as a source for research have been examined already by others.<sup>1</sup> Material history research is, however, often conducted by scholars from outside the museum environment. If museum professionals conduct material history research, it is often not directly involved with the collections in their charge. Material history methodologies intended to draw information from artifacts are not yet part of general museum practice.

Techniques for the systematic evaluation of the material culture evidence found in museum collections do have a practical application in the institutions themselves, and their utiliza-

tion by museum staff would facilitate other functions of a museum. The information gained by artifact analysis would provide the greatest benefit to interpretation programmes conducted by institutions that care for history collections. A systematic application of material history research techniques to discrete collections within a museum would also locate artifacts which, because of their provenance, would be of special interest to scholars.

This article details both the methods used in, and the conclusions drawn from, a study that was intended to be a model for such in-house material culture inquiries of history collections. The particular example in this instance is a collection of medical instruments located at a provincially operated heritage house.

The armamentarium of a physician or medical practitioner is an example of an assemblage

of artifacts that can survive in a museum collection because of special circumstances and that also demands a certain amount of sophistication in its interpretation. From at least the early nineteenth century on, physicians have occupied relatively high positions in society; especially in the recently established European settlements of North America before the twentieth century. From the ranks of the medical profession came many community leaders whose homes would become heritage houses and whose possessions would become museum artifacts.

Such a nineteenth-century medical professional was John Sebastian Helmcken, a surgeon of German descent who was born in Whitechapel, London, England (Fig. 1). Helmcken arrived at Fort Victoria in the Colony of Vancouver Island on the west coast of North America in 1850 as a medical practitioner in the employ of the Hudson's Bay Company (HBC). By the mid-1850s he was involved in local politics and by the late 1860s he derived most of his income from private practice. After participating in the negotiations leading to British Columbia's entry into Confederation in 1871, Helmcken left politics to devote his energies to his medical practice. He did not fully give up practising medicine until 1910, when he retired from the position of prison doctor in Victoria.

Helmcken's house, built in 1853, still stands on its original site in Victoria, British Columbia. Helmcken House is now operated as a heritage site by the Heritage Properties Branch of the provincial government, and many of the possessions of Helmcken and his family are on display there. From the time the house was first opened to the public in the 1940s, some of the artifacts on display included a large medicine chest and some pharmaceutical bottles, which had belonged to Helmcken. In 1987, however, an inventory of the artifact collection at Helmcken House uncovered a number of artifacts in the attic that had never been catalogued or displayed. They included many medical instruments and supplies, and their condition and storage suggested that they had remained in the attic at least since Helmcken had retired as prison doctor in 1910.

The John Sebastian Helmcken Medical Collection, over 130 accessions, was catalogued in 1988, and a portion of it has been on display since then. During the summer of 1992, a research project was undertaken on the collection as a whole, primarily in aid of the inter-



**Fig. 1**  
*John Sebastian Helmcken, ca 1860, approximately the period in which most of the artifacts in the Helmcken collection were acquired. (Courtesy the British Columbia Archives and Records Services (BCARS), HP 3077)*

pretation of the site. One of the aims of the research project was to use the medical artifact collection to draw conclusions about the nature of Helmcken's medical practice.<sup>2</sup> It was eventually decided that the best approach was to adapt a material culture methodology, or methodologies used for single artifacts, to the analysis of the entire Helmcken collection.

Helmcken's medical career has not been stressed in the interpretation of Helmcken House and one of the goals of the research project was to provide a context for the interpretation of the medical instruments. Conclusions were made about the relationship the present collection bears to the armamentarium that Helmcken actually used during his career. Other inferences were subsequently made by applying material history research methodologies to the collection.

### Helmcken's Medical Practice

Formerly, any conclusions about Helmcken's medical practices and the quality of treatment, which have been interpreted at Helmcken House, have come from three principal sources: anecdotal passages from the books of the artist and author Emily Carr, Helmcken's own *Reminiscences*, and an article written in the 1940s by a physician. Carr's descriptions of Helmcken's treatments of her and her brother for minor injuries are contained in her *Book of Small*; these have been the most-often quoted secondary sources describing his medical practices. The principal difficulty with using Carr's descriptions to analyze Helmcken's medical knowledge, besides the fact that she only mentions two cases, is that they are based on childhood memories.

Helmcken's *Reminiscences*, written in the 1890s and edited by Dorothy Blakey Smith in the 1970s, would seem to be a far richer source of information about how he practised medicine on Vancouver Island. Helmcken's medical career, however, was not as emphasized in this work as were his memories of people, events and his political career. The period after Confederation, when Helmcken began to concentrate on his medical practice again, was scarcely referred to in any context. However, what Helmcken did mention about his practice was useful to an analysis of his medical instruments. In reference to his early days in the 1850s on Vancouver Island as an HBC doctor, Helmcken wrote that though he had come out from England with an insufficient number of medical instruments and supplies, "At this time I had the power to order anything I wanted in the shape of drugs &c. from England, so ere a year or two had elapsed I had a good store, lots of bottles, corks and ordinary instruments."<sup>3</sup> Later in the book Helmcken offhandedly mentioned that he was coroner at the time of the gold rushes on the mainland.<sup>4</sup>

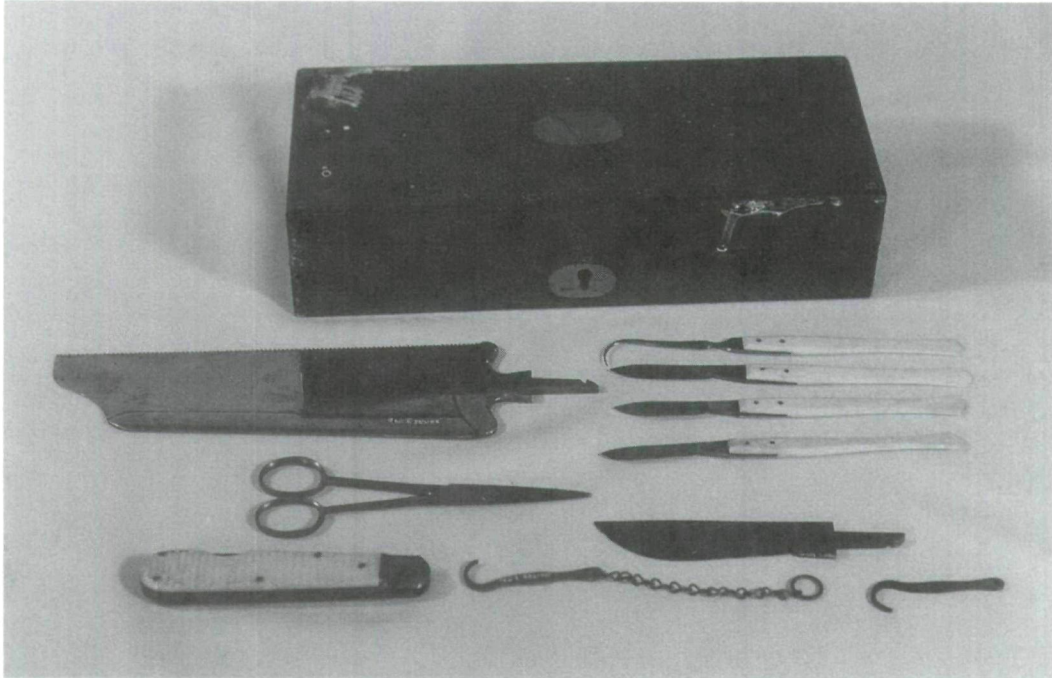
Both of these pieces of information were useful in determining the provenance and history of use of the Helmcken collection, but there are other references in Helmcken's *Reminiscences* that are more obscure and difficult to interpret. The only reference to the introduction of antiseptic surgical techniques does not shed very much light on whether or not Helmcken eventually employed them. Near the end of Helmcken's narration he recounts an incident where Governor Musgrave of British Columbia broke his leg and another Victoria doctor, Dr. Israel Wood Powell – who must have learned of the very first reports of Lister's theories of

antisepsis – treated the governor with more than enough carbolic acid poured directly onto the wound. Helmcken's only comment in the book on his opinion of the treatment was, "I did not propose or oppose the treatment, I knew too little of it to do either."<sup>5</sup>

Despite this lack of detail in both the Carr description and in Helmcken's *Reminiscences*, Dr. Honor M. Kidd, who, in the 1940s, wrote an article on Helmcken's career, apparently based her opinion of Helmcken's medical knowledge on these two sources alone. In Dr. Kidd's opinion Helmcken did not practise good medicine for his time and "his methods were rough and ready."<sup>6</sup> Though Dr. Kidd notes the respect that Helmcken's patients had for him, she seems to have the bias of a mid-twentieth-century physician with a strong belief in the progress of her profession in the time since Helmcken retired.

During the progress of the research, however, two previously neglected primary sources were used. One very important resource was located in the J. S. Helmcken Collection of the British Columbia Archives and Record Service (BCARS). A journal, written by Helmcken between 1857 and 1860, was used to record the medical supplies he ordered for various HBC operations on the Pacific coast, but the back pages were used to record the inventory of his own pharmaceutical supplies and surgical instruments. Many of the instruments in the Helmcken collection were comparable to some mentioned in the inventory. On the other hand, some entries in the inventory were either so general (i.e., "Surgeon's Pocket Case") or so obscure (i.e., "Wakley's Instruments") that it cannot be determined for certain if the items referred to are in the collection or not.<sup>7</sup> Also in the Helmcken Papers of the BCARS collection are account books, some of which refer to medical instruments under "Expenditures," but not nearly as often as could be expected.<sup>8</sup>

The second primary source, which was in the Helmcken House collection, was another journal in the same format as the medical inventory in BCARS, but from the earlier period of 1853 to 1856. The inventory in this journal is similar to, but not identical to, the later one, indicating that supplies were obtained during the period that the two inventories were made. As well, the 1853–56 inventory has separate columns for different years, indicating that some items were first obtained by Helmcken after 1853 but by 1856. Both of these journals proved to be invaluable in an estimation of the provenance of the medical instruments.



**Fig. 2**  
 One of two post-mortem kits in the Helmcken collection. Both kits are compact and very portable. (Courtesy Heritage Properties Branch, British Columbia Ministry of Tourism and Ministry Responsible for Culture)

A search of other possible sources that could shed light on Helmcken's medical career proved disappointing. Contemporary newspaper articles in the *Daily Colonist* and the *Victoria Herald* almost exclusively dealt with Helmcken the politician. The one exception was a short piece in the *Daily Colonist*, in an 1877 issue titled "A Great Surgical Operation." The article quotes from an Olympia, Washington Territory newspaper: "Dr. Davie, assisted by Dr. Helmcken and other members of the medical faculty of Victoria, on the 31st May, performed the operation of 'ovariotomy' on Mrs. Lewis Fraser of Mason County."<sup>9</sup> The significance of the article is that it was a very dangerous operation to perform even with antiseptic precautions, but it is possible that ten years after Lister's first publication of his techniques that a significant portion of Victoria's medical establishment would sanction such an operation only if antiseptics had been adopted by the surgeons involved. That Helmcken assisted in this operation may indicate he had adopted antiseptic techniques, something that not all older surgeons in Canada did.<sup>10</sup>

Helmcken's participation in an operation at St. Joseph's Hospital may also suggest he was not using his own surgical instruments. It has been suggested that Helmcken would use instruments that belonged to the hospitals,<sup>11</sup> and his role at this operation would tend to support this idea.

### Methodology

The methodology used in the material history analysis portion of the Helmcken collection research project was adapted from one devised by a graduate history seminar at the University of New Brunswick in the mid-1980s and described in an article published in *Material History Bulletin*.<sup>12</sup> This same methodology was the basis for Gregg Finley's recent study of gothic revival architecture in Victorian churches in New Brunswick.<sup>13</sup> Originally designed for the analysis of single artifacts, it was here adapted to the purpose of an analysis of a discrete collection of artifacts with the same provenance and associated with each other in their original use.

The methodology, as used by Finley, involves the consideration of five aspects of the artifacts on two different levels: material, construction, function, provenance and value. Level one consists of physical examination, comparisons with similar collections, and incorporation of documentary information into the analysis. In Finley's words this is the "reading of the object."<sup>14</sup> In the case of the Helmcken collection, I adapted the second step to include comparisons of artifacts within the collection. In continuing with Finley's model, level two would have related the data to larger research questions.<sup>15</sup>

In the context of this study, however, research questions were not as important as making

**Fig. 3**  
*Brass ear syringe that exhibits a high standard of craftsmanship typical of many of the instruments in the collection.*

generalizations about the importance of the collection and relating that significance to the functions of the institution, which is charged with its care and preservation. With the exception of the question of whether or not Helmcken practised antiseptic techniques at any point in his career, the study was initiated with only general questions being asked: 1) Are the artifacts in the collection representative of those he used during his entire medical career? 2) What instruments were used more than others, and what does this indicate about Helmcken's medical techniques? 3) What do the choices Helmcken made in obtaining instruments indicate about the nature of his practice? 4) Do the construction and decorative elements of the instruments encode any cultural messages?

The material history analysis of the Helmcken collection was conducted in three steps, which are outlined as follows.

#### **Step 1. Observable Data**

The analysis began with the material used in the different artifacts in the collection. Since the collection was catalogued on a computer database, advantage was taken of the ability to quantify the frequencies of the different materials used in the entire collection. Most instruments and instrument sets were made of compound materials. The most frequently used materials were brass, used in 31.86 per cent of the artifacts in the collection, steel in 31.86 per cent, silver or silver plate in 13.27 per cent, high-quality woods (such as ebony and mahogany) in 10.62 per cent, and ivory in 8.84 per cent. There was also a relatively high occurrence of such soft materials as velvet, leather, and kidskin.

The next portion of the analysis was an examination of the construction of the major surgical and medical instruments and instrument sets, 44 items in total. Decorative elements were examined and the level of craftsmanship was determined. This last category was extremely subjective, based on the criteria of attention to detailing, the technical difficulty of the decorative elements, the sophistication of the construction techniques, and an estimation of the amount of labour represented by each object. The level of craftsmanship embodied in each artifact was judged to be at one of seven possible degrees ranging from low to very high. On this scale none of the selected artifacts were judged to be of low craftsmanship, 4.55 per cent to be of medium-



to-low craftsmanship, 52.27 per cent medium, 18.18 per cent medium to high, 20.45 per cent high, 4.55 per cent high to very high, and none of very high craftsmanship.

There were only six instruments that were in no way decorated. All the other instruments examined either had decorative elements or were stored in a decorated case. A good example of this is a set of urethral sounds that are undecorated because of their function. The case that the sounds are stored in, though, is covered in red leather, and like almost all the instrument cases, lined with velvet. The lid of the case is decorated with a silver plaque and an embossed floral or scroll pattern around the edge.

A comparison of wear patterns on the surgical instruments indicated that the quantity of wear varied greatly. Some instruments may have never been used in surgery. An example of this is a set of amputation knives and saw included in a set of surgical instruments presented to Helmcken as a prize in 1847, while

he was still a student at Guy's Hospital in London. Other sets of instruments include those that contain several scalpels and bistouries; only one or two of these have been used. It is most often the least specialized scalpel that has indications of heavy use. In the example of a post-mortem kit (Fig. 2), most of the instruments had indications of regular to somewhat heavy use. One large knife blade, however, evidenced much use and had been sharpened a great deal.

Besides wearing, evidence of heating was found on some scalpels. Two of these scalpels were in the post-mortem kit previously mentioned, while on two surgical scalpels the evidence of heating was less conclusive. All four scalpels had ivory or wooden handles making them unsuitable for antiseptic surgery, but the evidence of heating may indicate that Helmcken tried to adopt antiseptics before he fully understood it.

The origin of Helmcken's instruments was also determined at this stage in the investigation. Of those artifacts in which the country of origin was known, 34 were made in England, 19 in the United States, 4 in France and 1 in Canada. All of the medical instruments had been manufactured rather than built by the person who would have used them.

Most of the instruments were made of high-value materials and more often with a relatively high degree of craftsmanship (Fig. 3). It was therefore assumed that the instruments were originally of a high monetary value. Further, the presence of decorative elements on some of the instruments or their cases possibly indicates a value beyond their utilitarian function.

## Step 2. Comparative Data

Comparison with similar collections was hampered by the uniqueness of the Helmcken collection within Canada. Although other museums in Canada had collections of medical, surgical and pharmaceutical instruments, which were at least fairly representative of the instruments originally owned by individual physicians, none were from British Columbia and none were determined to be from the same period. Very few of these collections have been analyzed as discrete assemblages by the institutions to which they belong.

A published catalogue of a collection of instruments from one nineteenth-century doctor's armamentarium was, however, located: *Nineteenth Century Surgical Instruments: A*

*Catalogue of the Gustav Weber Collection at the Howard Dittrick Museum of Historical Medicine* by James M. Edmonson, now curator of the Howard Dittrick Museum in Cleveland, Ohio. The collection described in the catalogue had belonged to an American teaching surgeon originally from Germany, Dr. Gustav Weber, whose career was contemporary with that of Helmcken's.<sup>16</sup> Almost all comparisons made in this second level of analysis of the Helmcken collection were either made between this collection and the Weber collection, or within the Helmcken collection itself.

In general terms the materials used in the construction of the instruments of the Weber collection were similar to those used in the instruments of the Helmcken collection. Brass and steel with ivory and high-quality wood for handles were used for the instruments, and their cases were either covered with leather or of brass-inlaid mahogany with velvet linings. The instruments of the Helmcken collection and the Weber collection also resemble each other in the generally high level of craftsmanship and the incorporation of moderate decorative elements.

The range and variety of instruments in the Weber collection and in the Helmcken collection nevertheless contrast. Dr. Weber's armamentarium was larger than Helmcken's and included diagnostic instruments of a greater complexity than those owned by Helmcken. The Weber collection also included very specialized surgical instruments such as a cleft palate surgery set and laryngeal instruments for removing polyps of the larynx. The surgical instruments in the Helmcken collection were, for the most part, employed in minor surgery or amputation, although there are some others such as trephining instruments used for cutting circular sections from the skull.

The Helmcken collection includes both gynaecological and obstetrical instruments, while only one vaginal speculum and one pair of obstetrical forceps appear in the Weber collection. Other objects that appear in the Helmcken collection and not at all in the Weber collection are cupping instruments and apparatus, trusses, dislocation pulleys, and pharmaceutical equipment.

Nevertheless, there are a number of instruments that the two collections have in common. For instance, both the Helmcken and Weber collections have two sets of post-mortem kits. Besides the instruments intended for very specialized types of surgeries, which appear in the

Weber collection, many of the surgical instruments in the two collections are similar. As well, each collection includes a stomach pump of similar design.

The instruments of the Weber collection appear to have similar worth beyond their value as medical instruments. What is more, the Weber collection, unlike the Helmcken collection, has some instruments that were very expensive even for most physicians: The best example is an osteotome, a bone-cutting instrument, which George Tieman & Co. of New York sold for \$300.00 in 1879.<sup>17</sup>

Within the Helmcken collection itself, comparison of the artifacts was also revealing. For instance, wear patterns suggested that the cutting instruments of a more general design seem to have been used more often than those of a more specialized nature. Additionally, the two objects that contrast the most with the balance of the collection are two of the three sets of apothecary's scales. Manufactured for use by apothecaries rather than physicians, the scales were more cheaply constructed. Both scales were made of less expensive alloys and were stored in unfinished wooden boxes with wire hinges.

### Step 3. Supplementary Data

What the sources previously mentioned indicate is that Helmcken went through a period of acquiring medical supplies and instruments in the 1850s while he was an employee of the HBC. Helmcken stated this in his *Reminiscences*. The earliest of the two medical inventories begun in 1853 showed that there was already a great number of instruments and other objects listed that corresponded to artifacts found in the collection. In the second inventory of 1857–60 there were some objects listed, such as a wedgwood mortar, that were not listed in the previous inventory. In the account books from late in Helmcken's career there are few references to any medical supplies except two syringes, thermometers and unspecified instruments.

Besides the thermometers and hypodermic syringes, one of which has been positively identified as being acquired between 1883 and 1892, only one other instrument can definitely be confirmed as having been manufactured after 1860. An apparatus identified in the catalogue as an enema syringe is very similar to a stomach pump shown in a photograph in the catalogue of the Weber collection. In the catalogue, Edmonson states that this type of stomach pump with a two-way valve was invented

in 1869.<sup>18</sup> A similar apparatus, but of a simpler design and with a piece broken off, is also in the collection, which leads one to the possible conclusion that the more complex pump was acquired after 1869 only because the first stomach pump was damaged.

### Conclusion

A proviso to this speculation is that there are indications that not all of Helmcken's instruments that he kept after his retirement are presently in the collection. The medical supply inventories of the 1850s list stethoscopes and yet there are no stethoscopes in the Helmcken collection. There is a microscope case in the collection, but there is no microscope. Therefore the answer to the first of the general questions asked in the study is that the present collection is a fair representation of at least the instruments Helmcken personally owned during his career. The collection is, perhaps, best representative of the period in his career when he was still an employee of the HBC.

Further speculation as to what the instruments indicate about Helmcken's medical techniques suggests that he was probably not as up-to-date in current medical practices or as sophisticated in his surgical techniques, just as Dr. Honor M. Kidd had concluded. However, Helmcken's dependence on less specialized cutting instruments may simply indicate that he knew what worked. He apparently did not subscribe to more than one medical journal, and that only prior to 1860, but over his long career Helmcken must have learned through trial and error. To Dr. Kidd, a physician of the 1940s, this meant inferior medicine, but in the nineteenth century this might have been more reliable in general practice than trying to keep up with the latest techniques and therapies.

The type of instruments Helmcken chose indicates he was a general practitioner who was not in any way a specialist, even by mid-nineteenth-century standards. He did perform some surgery, but mostly minor surgery, amputations, trephining and lithotomy (removing gall stones, kidney stones, etc.). Above all he was firmly entrenched in the mainstream heroic medicine of the period, accepting the usefulness of such practices as bloodletting and cupping.

More specific ideas on Helmcken's practice are more difficult to discern from the instruments. There are two scalpels that have definitely been heated, and two that may have been, but no other indications that Helmcken

used antiseptic techniques. There are cupping and bleeding instruments, but no way to determine when they were last used. What is easier to determine is that Helmcken may have done a good deal of travelling because of the large number of small travel instrument kits, the presence of a saddle bag modified to carry medicine bottles, and the lack or near lack of wear patterns on amputation instruments in the large, unwieldy case given to Helmcken as a student.

The fact that the medical and surgical instruments or their cases almost always had a degree of decoration and were made from higher quality materials, while the two apothecary's scales were not decorated and have cheap wooden boxes, indicates that there were two different social attitudes at work here: that of physicians and that of the apothecaries who normally would have used the scales. Physicians and surgeons in the nineteenth century had social aspirations, and their instruments reflected this as material culture.

It is generally agreed that museum collections are not necessarily representative of the material culture of the past.<sup>19</sup> It sometimes comes to pass, however, that serendipitous circumstances provide for the preservation of artifact collections that more or less represent an assemblage of artifacts created by the original owner. Understandably, given the collecting processes of history museums, the existence of such complete, or nearly complete, collections are rare.

Some such collections do exist in museums, though, and represent unique opportunities for material history research. The assemblage as a whole can be considered as a creation by the person who chose the objects to be used for related purposes or for a single-type of endeavour. The decisions made by the original owner would obviously be reflective of practical considerations involved with the particular purpose to which the artifacts were put, but may also be reflective of other considerations, such as the

status of the individual or the status of the individual's trade or profession.

Further, if there are enough similar collections in a given geographic area, comparisons could be made. Not only could local and individual variations in the particular trades and professions be determined, but if the individual collections were relatively complete, at least one problem related with researching museum collections would be addressed. Robert Turner has pointed out the inaccuracy of museum collections in representing the original frequency of particular types of artifacts during their working lives.<sup>20</sup> Without in-depth knowledge of more than one other similar collection it was not possible for the writer to establish how much of Helmcken's choice of medical instruments was a consequence of his special circumstance. Neither was it possible to establish any traits in his choices except a tendency toward heroic medicine, which could be classed as a cultural bias peculiar to mid-nineteenth-century medical practitioners.

My proposition, therefore, is that preliminary material history research on a level-one basis be practised almost as a matter of course in history museums and heritage sites. This may be facilitated by the growing number of museums using computer databases for cataloguing. The information that was gathered in such a study of the Helmcken collection will eventually provide the framework for its interpretation. The larger issues that would have been addressed in a level-two analysis are more appropriate to a comparison of the Helmcken collection to similar collections. Further research on other collections will appear if there is wider adoption of material history methodologies within museums. This could take the form of published catalogues or at least research reports that museums could make available to researchers. It is in the comparison of similar collections that material history scholars can best take advantage of the material evidence preserved in museums.



## NOTES

1. A recent example is J. Lynne Teather, "Silk Purses from Sows' Ears: The Study of Material Evidence in Museums," *Material History Bulletin* 32 (Fall, 1990): 29-43.
2. The research project was part of an internship programme sponsored by the Cultural Resource Management Programme of the University of Victoria and was conducted under the supervision of the Heritage Properties Branch of the British Columbia Ministry of Tourism and Ministry Responsible for Culture.
3. Dorothy Blakey Smith, ed., *The Reminiscences of John Sebastian Helmcken* (Vancouver: University of British Columbia Press, 1975), 121.
4. *Ibid.*, 170. Smith adds that Helmcken can be first identified as being coroner on 21 October 1857, when he signed the notice for reward for the apprehension of a Richard Jones. Helmcken resigned the following year.
5. *Ibid.*, 250: Dr. Israel Wood Powell was later appointed British Columbia's first Indian Commissioner in 1872, shortly after the province joined Confederation. Robin Fisher, *Contact and Conflict: Indian-European Relations in British Columbia* (Vancouver: University of British Columbia Press, 1977), 180.
6. Honor M. Kidd, "Pioneer Doctor: John Sebastian Helmcken," *Bulletin of the History of Medicine* 21, no. 4 (July-August, 1947): 457.
7. British Columbia Archives and Record Service (BCARS), Add. MSS 505, vol. 3.
8. *Ibid.*, vols. 5-6.
9. "A Great Surgical Operation," *Victoria Daily Colonist*, 18 July 1877.
10. See Charles G. Roland, "The Early Years of Antiseptic Surgery in Canada," in S.E.D. Shortt, ed., *Medicine in Canadian Society: Historical Perspectives* (Montreal: McGill-Queen's University Press, 1981), 237-253.
11. Shirley Cuthbertson, History Curator, Royal British Columbia Museum, interview with author in May 1992.
12. "Towards a Material History Methodology," *Material History Bulletin* 22 (Fall, 1985): 31-40. Methods of artifact analysis have been developed by art historians, archaeologists, folklorists and other academics for at least the past three decades. Two specific works that have informed the present study are James Deetz, *In Small Things Forgotten: The Archaeology of Early American Life* (Garden City, New York: Doubleday, 1977); and Jules Prown, "Mind in Matter: An Introduction to Material Culture Theory and Method," *Winterthur Portfolio* 17, no. 1 (1982): 1-19.
13. Gregg Finley, "The Gothic Revival and the Victorian Church in New Brunswick: Toward a Strategy for Material Culture Research," *Material History Bulletin* 32 (Fall, 1990): 1-16.
14. *Ibid.*, 10.
15. *Ibid.*, 10-11.
16. James M. Edmonson, *Nineteenth Century Surgical Instruments: A Catalogue of the Gustav Weber Collection at the Howard Dittrick Museum of Historical Medicine* (Cleveland: Historical Division, the Cleveland Health Sciences Library, 1986).
17. *Ibid.*, 31.
18. *Ibid.*, 46.
19. See Teather, "Silk Purses from Sows' Ears," 29-43; Robert D. Turner, "The Limitations of Material History: A Museological Perspective," *Material History Bulletin* 20 (Fall, 1984): 87-92.
20. Turner, "Limitations of Material History," 89-90.