

The Lens of Science: Anthropometric Photography and the Chippewa, 1890–1920

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Nineteenth-century anthropologists struggled to establish themselves as scientists in a cultural milieu of enthusiasm for “curiosities.” Because commercial photographers appropriated the “authenticity” of photographic realism, the need increased for ethnographic photographers to distinguish between such realism and the “scientific authority” of their own visual productions. Through a case study of anthropometric photography of the Chippewa, this article examines the tension between, on the one hand, ethnographers’ exploitation of the technological and symbolic attributes of photography to promote the scientific and political goals of the discipline, and on the other hand, the influence and function of visual genres and visual allegories in conditioning and framing what viewers accepted as “real” and “true.”

INTRODUCTION

Contemporary theories suggest that visual perception is an interpretive exercise rather than a mechanical process [Wright 1992]. Visual stimuli are intelligible only insofar as the viewer can relate them to known frames of reference. Viewers employ at least two frames of reference in their interpretation of photographs: (1) visual genres, and (2) visual allegories. The term “visual genre” refers to both the subject matter of the image and the aesthetic conventions employed to depict it. Visual allegories are images whose symbolic contents refer to culturally constructed, and collectively shared, narrative frameworks. As Edward Bruner [1986: 150–153] explains, such “master narratives” organize and give meaning to experience and its representations by providing social roles for action within lineal sequences of events. As photography developed during the nineteenth century, viewers interpreted its visual productions with reference to visual genres and visual allegories that were already well established in other mediums of representation. Brian Dippie [1992: 43] has noted that photographers of Native Americans adopted the pre-existing visual allegories of the “disappearing Indian” and “civilization’s progress in America.” For a few decades before

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and after the turn of the twentieth century, such photographs proliferated in the rapidly growing commercial market for *carte-de-visite*, stereoscopic and postcard images.

During this same period, anthropologists were struggling to establish their discipline as a science. A crucial component of their success was their reliance upon the collection, analysis, and presentation of hard evidence, rather than upon imaginative speculation [Hinsley 1982: 35]. For a variety of reasons, photography offered anthropology unprecedented opportunities for collecting and distributing authoritative scientific data. Nineteenth and early twentieth century anthropologists shared with their audiences the assumption that moral and mental characteristics are clearly revealed in the physical traits of humans [Linkman 1933: 35] and in their technological productions [Hinsley 1981: 88-89]. They also believed that art is inherently interpretive, but that photographic images depict unmitigated reality because the photograph is literally a "material vestige of its subject" [Sontag 1973: 154]. They therefore believed that photographs were not only "true" in terms of their visual contents, but also in terms of the intangible information that this visual data revealed.

Through a case study of anthropometric photographs of the Chippewa, I demonstrate, on the one hand, that ethnographic photographers chose and manipulated visual genres to bolster the scientific authority of their images and thereby the validity of their scientific claims, and on the other hand, that visual allegories influenced both anthropologists' and other viewers' perceptions of photographic images to such a degree that they did not appear "real" and "true" unless they conformed to the dominant master narrative. Hence, "photographic realism" is a double-sided concept that encompasses not only the idea that photographs "capture" a piece of "reality," but also the perceptual processes in which socially constructed visual allegories circumscribe the boundaries of that "reality," and visual genres serve as interpretive frameworks within it.

Anthropometry is the practice of making systematic observations, both quantitative measurements and qualitative impressions (including photographs), of the physical traits of humans for the purpose of drawing generalizations about and comparisons between various populations, as well as for identifying individuals in relation to particular populations. Anthropometric photographs take human beings as their subject matter, and very often focus on the head and face. For this reason, they bear a significant relation to the visual genre of portraiture, which has been influential in their historical development.

GOVERNMENT PORTRAITS

The American tradition of government-sponsored Indian portraits originated in 1824 when Thomas McKenney, the head of the Bureau of Indian Affairs, commissioned Charles Bird King to paint portraits of Indian chiefs visiting Washington on official business [Viola 1976: 13]. As the portrait of the Pawnee Chief Sharitarish illustrates [Figure 1], King's paintings followed the conventions for portraiture established for European subjects. Accordingly, his paintings were almost all busts, the subjects posed at a three-quarter angle with their eyes either



Figure 1 "Sharitarish [Wicked Chief], Pawnee," by Charles Bird King, 1822. [White House Collection, Courtesy of White House Historical Association (518).]

following the line of their heads or gazing placidly at the viewer. To Western viewers, who believed that the facial expression revealed the inner qualities of the subject, the calm and often pensive expressions of the chiefs revealed their "noble" and intelligent characteristics [Linkman 1993: 35]. King's paintings not only reflected McKenney's interest in ethnology, but were actually a part of his collection of ethnological artifacts. Although the delegates were customarily fitted with new clothes as part of the ritual of diplomatic relations of the time, King generally portrayed them in the regalia in which they had come to Washington [Viola 1976: 25, 28, 41]. Although it is likely that he kept props in his studio, such as ceremonial pipes and war clubs, the broad range of clothing

and accessory styles that he depicted suggests that his representations were fairly accurate. He thus preserved a record of chiefs' ceremonial dress in different parts of the continent, from the painted buffalo robes of the Plains nations to the "citizen's dress" of the chiefs of the "Five Civilized Tribes." There are only three King paintings of Chippewa subjects, which he copied from watercolors that James Otto Lewis had painted while accompanying Governor Cass on treaty parties [Viola 1976: 55-58, 138]. Unfortunately, Lewis did not have King's ability to depict lofty expressions, so these few paintings cannot serve as examples of the European ideal of beauty that characterize the works that King created from live subjects.

By the 1850s, a number of bureaucratic shifts had left the King paintings to gather dust in obscurity. In 1858, however, new interest in Indian portraiture was stimulated in Washington when the King portraits were donated to the newly established Smithsonian Institution. Joseph Henry, the first head of the Smithsonian, displayed them together with a large collection of John Mix Stanley's Indian portraits, which the artist had loaned to the museum. Both Stanley and Henry hoped that Congress would purchase his collection, but they did not. The same year, the James McClees Studio photographed a group of Indian delegates in Washington. Perhaps having seen these images, Joseph Henry proposed that the tradition of Indian portraiture should be revived. To save money, however, he recommended that prominent Indian leaders should be photographed instead of "sitting for expensive and time-consuming oil portraits" [Viola 1976: 114-115; Fleming and Luskey 1986: 22]. Significantly, his proposal stated that the new photographic record should be more concerned with the physical characteristics of the subjects and less ethnological: "... the head [should be] divested of any covering so as to show its conformation. In short, the pictures should be portraits of the men and not of their garments or ornaments" [*ibid.*: 23].

During the 1850s, anthropologists increasingly focused on the physical characteristics of the "races of man." They began to use cameras to collect visual data systematically that they thought would help determine the characteristics of "racial types." In 1852 the British Association for the Advancement of Science published the *Manual of Ethnological Enquiry* in which photography was recommended as a method to "obtain an accurate record of individual likenesses" [Spencer 1992: 99]. Anthropologists in France and England produced portraits depicting racial types, which they compiled into volumes for sale by subscription. These images were devoid of ethnographic context because it was not considered pertinent to studies of racial physiology [Banta and Hinsley 1986: 61]. In 1850, the zoologist Louis Agassiz of Harvard University commissioned photographs of at least eight Black slaves in South Carolina [*ibid.*: 57]. His study is an early example of anthropometric photography, which quickly became an indispensable component of anthropometric observation. During this same period, Agassiz also spent an afternoon "studying public men's physiognomies" in the photographic portrait gallery of Mathew Brady, who systematically took the "likenesses" of the most prominent American leaders of the day [Townsend 1980 (1891): 48]. Although photography was thus gaining support in the scientific community, Henry received no government sponsorship for his portrait proposal until after the Stanley and King portrait collections were consumed by fire in 1865. In 1867 Washington was inundated with Indian delegations. With funds

from the government and the private British collector William Henry Blackmore, a few select photographers produced a series of portraits that were exhibited at the Smithsonian in 1869 [Fleming and Luskey 1986: 23]. From that time forward, government-sponsored agencies in Washington hired their own photographers in order to record visiting delegations systematically.

During the nineteenth century, photographers and the public alike were keenly aware of the mechanical processes through which cameras captured images on a variety of surfaces. This awareness is reflected in popular contemporaneous expressions such as "[the photographer] grasped the shadows of . . .," "in the pencil of the sun," and "seized his image in the focus of the sun" [Townsend 1980 (1891): 45, 48, 49]. In her seminal article on the relation between photography and art, Lady Eastlake [1980 (1857): 81, 84, 92, 94] found "the Sun" wanting as an artist in the unforgiving and indiscriminating way in which "he" portrayed the minutest detail of everything that came within "his" view. In contrast, she argued, the true artist concentrates attention on the most important part of a picture, at the expense of the rest, within which he or she attempts to "idealize or soften the harshness of accident." Whereas photography had therefore no contest with art, she concluded, its virtue was that "every form which is traced by light is the impress of one moment, or one hour, or one age in the great passage of time." According to this view, even photographic portraiture derived its value from historical, rather than artistic, characteristics [*ibid.*: 94]. For example, when the American portrait photographer Mathew Brady was asked if all men were "like pictures" to him, he replied, "Pictures because events" [Townsend 1980 (1891): 48].

During the latter half of the nineteenth century and the first decade of the twentieth, this view of the historical role of photography underlay the production of government-sponsored Indian portraits and influenced this visual genre in the direction of group sittings. One of the main purposes of McKenney's Indian portrait collection had been to record the historical events that would, it was assumed, hasten the inevitable extinction of the Indian race. As with Brady's sentiment above, government officials saw the value of Indian portraits in their recording of important political events which, by their nature, involved relations between several parties. One advantage photography had over oil painting in this regard was that it made group portraits practical to produce because the camera reduced the artist's work of a few weeks to a few brief minutes. More importantly, the historical value of photographic group portraits was much higher than that of painted group portraits. Whereas the former recorded actual and singular events in which particular groups of individuals were at the same place in time, the latter could be created at any time or place.

The photograph reproduced in Figure 2 was taken in 1899 by De Lancey Gill, who was the staff photographer of the Bureau of American Ethnology at the turn of the century [Fleming and Luskey 1986: 178]. It depicts a delegation of Ojibwa leaders from Leech Lake, Minnesota, who visited Washington only five months after the "Bear Island War of 1898," which was an armed protest led by Leech Lake war chiefs. Leech Lake civil leaders took advantage of the strife to demand redress of unfulfilled treaty promises and to strengthen their case for refusal to relocate [Kugel 1998: 187–188]. This photograph recorded one of several negotiation sessions through which the Leech Lake Ojibwa were able to remain



Figure 2 "Chippewa (Leech Lake Band) Delegation to Washington," by De Lancey Gill, Feb. 1899. [Courtesy of National Anthropological Archives (neg. 55,665).]

on their ancestral lands. Whether by accident or design, the head chief Flat Mouth (second from right, front row) appears dignified and formidable in the three-quarter angle of the conventional portrait pose.

Although government-commissioned photographic portraiture retained the historical aims of McKenney's earlier collection, which were enhanced by the perceived "realism" of photography, by the 1890s the documentation of cultural traits such as clothing and ornament was often ignored in favor of the emphasis of anthropometry on the physical traits of racial types. This shift of interest from ethnology to physical anthropology also entailed a shift in aesthetic preferences. In contrast to the earlier reliance on the visual genre of painted portraiture, the majority of anthropometric images were taken in partial conformity with the visual genre used for specimens of the hard sciences. This genre called for images of full-front, full-profile and full-back views of the subjects [Banta and Hinsley 1986: 58]. Although the full-front pose was a departure from the three-quarter view rule of conventional painted portraiture, it had become the standard visual genre for the inexpensive photographic portraits that were popular with the lower and middle-class clientele [Tagg 1988: 36–37]. Hence, the transformation of the subject into a specimen of data is most evident in the full-profile view. The photograph of Flat Mouth in Figure 3 was taken on the same day as the group portrait depicted in Figure 2. His slumping posture and diminutive stature illustrate the degree to which the full-profile view can radically compromise a subject's appearance of integrity, intelligence and power.



Figure 3 Flat Mouth, Nigan'ibines or Leading Bird of Prey, Chippewa (Leech Lake Band), by De Lancey Gill, Feb. 1899. [Courtesy of National Anthropological Archives (neg. 503-c).]

There are a number of reasons why full-profile views are particularly prone to objectify Native American subjects. First, the pose appears stark and totally unnatural to viewers whose eyes are trained to see "grace and dignity" in the three-quarter view [Linkman 1993: 46]. Rather than viewing full-profile anthropometric images within the framework of the visual genre of portraiture, contemporary viewers most readily liken such images to police "mug shots." The bland backgrounds typical of anthropometric photographs contribute to this association. Yet there is nothing inherent in the full-profile pose that denies dignity. In fact, during the early Renaissance the full-profile was the favorite pose of noble and aristocratic subjects, upon whom it imbued honor and respect, while the characteristic "grave demeanor" reflected the inner virtues of "moral



Figure 4 "Matteo Olivieri," Artist unknown, Florentine, c. 1440/1450. [Andrew W. Mellon Collection. Courtesy of the Board of Trustees, National Gallery of Art (1937.1.15).]

rectitude" and "self-restraint" [Anon: 2001; Figure 4]. During the decades immediately preceding the rise of photographic portraiture, the market for cut-out miniature silhouette portraits had expanded from aristocratic clientele in the 1770s, to the rising middle classes in the early nineteenth century, and finally to the common people by mid-century [Linkman 1993: 17–21; Tagg 1988: 39].

Consideration of the subjects' "demeanor" raises the issue of the social context of image production. During the Victorian era, the received wisdom was that excellence in painted portraits arose from the painter's ability to interpret the

sitter's innermost and spiritual nature in a single characteristic facial expression. He was supposed to have garnered this knowledge from repeated encounters with his subject, during which he had encouraged revelation of the quintessential expression by conversing on a variety of topics. The expediency of photography, however, challenged portrait photographers to discover the characteristic expression and to reproduce it at will within a matter of minutes rather than days or weeks. Consequently, portrait photographers adopted a variety of means to influence their subjects to assume suitably introspective and lofty expressions [Linkman 1993: 39–43]. As an early American daguerreotypist wrote in 1864, "the sitter, before a transcript is taken of him, should be put into a mood, which shall make his face *diaphanous* with the expression of his highest and best, i.e. his *genuine, essential self*" [Root, in *ibid.*: 41; underlined in original].

Whereas today most people would question the validity of this theory of "characteristic expressions," we may readily admit that we can visibly perceive emotions and attitudes in facial expressions and bodily poses. One reason why full-profile images of Native peoples often call to mind denigrating rather than uplifting associations is that the social context in which photographers attempted full-profile portraits of Native Americans was not conducive to evoking lofty or introspective expressions. According to a government photographer, De Lancey Gill, the full-profile pose was not popular among his Native American subjects. He noted that while they "allowed" this pose if he patiently cajoled them, they preferred the full-front view [Fleming and Luskey 1986: 178]. This is not surprising because most nineteenth-century Native Americans would not have seen themselves from the full-profile angle and would therefore have difficulty relating to such an image. In view of their perception of visual images as a form of power, it would also be difficult for them to submit to visual scrutiny without being allowed to return the gaze. True to their reputation for uncensored accuracy, the government photographers' cameras reproduced expressions of discomfort and reluctance among Native American subjects of full-profile views. No doubt subjects of "mug shots" express similar feelings during their encounters with police photographers, if for different reasons.

Although government photographers such as De Lancey Gill produced anthropometric full-front and full-profile views, essentially they practiced photography within the theoretical underpinnings and social conventions of the visual genre of portraiture, which was still thought suitable for the documentation of Indian chiefs and dignitaries. Yet, with the introduction of anthropometry, interest in the appearance of Native subjects began to shift from what visual data could convey about the individual in the historical moment to what it showed about the subject's place in the classification of "racial types" on the stages of the evolutionary "ladder." Despite superficial appearances, the "stages" of social Darwinism were synchronic, due to the fact that the "type" classifications were based on contemporaneous data. Furthermore, the social conventions governing relations between photographers and their subjects that were emerging within the relatively new field of physical anthropology were founded upon very different principles and power relations than was conventional portraiture. In particular, anthropometric photographers were usually structurally superior to the subjects with regard to race and their affiliations with powerful authorities.

According to John Tagg [1988: 9–10], the way in which early anthropometric photographs objectified subjects in the full-profile and full views, as well as their resemblance to police “mug shots,” was symptomatic of a “reversal of the political axis of representation” that took place during the late nineteenth century. Whereas formerly it was the exclusive privilege of the upper classes to “have one’s portrait done,” to submit to having authorities take their likeness increasingly became the “burden” of the disadvantaged. This “reversal” is most clearly seen in the difference in value attributed to the full-profile view in Renaissance paintings and eighteenth-century aristocratic silhouettes in contrast with the combination of full-profile and full-frontal pairs of images in nineteenth and twentieth century “mug shots.” Tagg argues that this transformation of the value of representations and the social relations of image production was due to the new strategies of power that industrialized states employed to control their citizens. Based on relations of “dependence and consent,” rather than on “coercion and authoritarian control,” these strategies entailed new “techniques of surveillance” that penetrated into the private lives of citizens in unprecedented ways and degrees. As a means to achieve social order, Tagg [*ibid.*: 11] suggests that photography was deployed in

privileged administrative practices and the professionalized discourses of the new social sciences. . . . In terms of such discourses, the working classes, colonized peoples, the criminal, the poor, ill-housed, sick or insane were constituted as passive—or, in this structure ‘feminized’—objects of knowledge. Subjected to a scrutinizing gaze, forced to emit signs, yet cut off from command of meaning, such groups were represented as, and wishfully rendered, incapable of speaking, acting, or organizing for themselves.

Tagg [1988] dwelt mainly upon the social function of photography in institutions such as prisons, hospitals, and insane asylums, where photographs served as authoritative evidence of the individual identity of their subjects. Although anthropometric photographs similarly silenced their subjects, they often did so by molding and maintaining a Darwinian vision of social order in which each subject was primarily important in terms of his or her placement in a series. Both the penetration of the state into the daily lives of Native Americans, and the role of anthropometric photography in this process, are evident in the state-sponsored anthropology exhibits at world’s fairs around the turn of the twentieth century.

AT THE FAIR

The first systematic anthropometric study in which the Chippewa were involved was conducted under the supervision of Franz Boas at the World’s Columbian Exposition in Chicago in 1893. Frederic Putnam, the director of the Peabody Museum at Harvard, was in charge of the anthropology exhibit at this fair and the ethnological exhibits on the Midway Plaisance [Hinsley 1991: 348]. Taking the lead from the success of the “ethnographic villages” at the Paris Exposition of 1889, Putnam staged an outdoor encampment adjacent to the Anthropology Building that included members of a variety of Indian nations who constructed

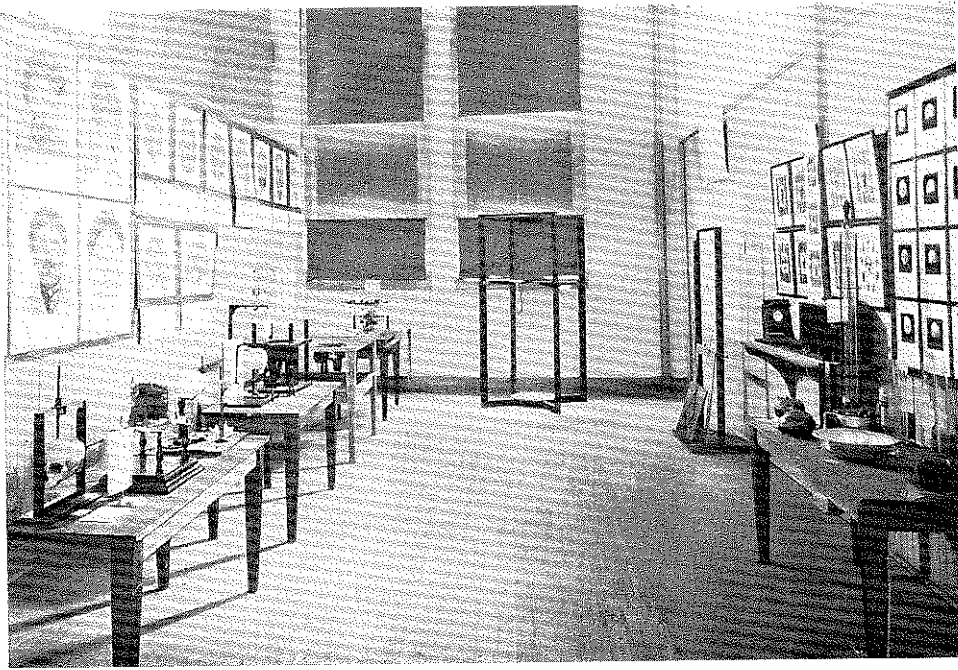


Figure 5 Anthropometry Room at the World Columbian Exposition, Chicago, 1893. [In Johnson, Rossiter, 1897, *A History of the World's Columbian Exposition in Chicago in 1893*, Vol. II: 349. Courtesy of the Chicago Historical Society.]

traditional dwellings to form "villages" where they lived and performed traditional arts and occupations daily. The object of this "exhibit" was to impress upon the visitor the contrast between these peoples, who had "about vanished into history," and modern America, which had forced them to "give way before a mighty power" [Putnam, in Hinsley 1991: 347].

The anthropology display also included an anthropometry laboratory that Boas used to gather anthropometric data on a large number of individuals [Figure 5]. According to Boas' published results of the men whom he and his assistants measured, there were 3018 full-bloods, 594 mixed-bloods and 217 whites [Jenks 1916: 2]. Undoubtedly, the majority of these people were Indian participants in the exhibits who were obliged to submit to the procedure. In contrast, for 50 cents, visitors could have their heads measured and compared to the "typical" head measurements of other races [Banta and Hinsley 1986: 61]. A more engaging point of comparison, however, were the dozens of photographic portraits that lined the wall of the laboratory. Here, surrounded by instruments for precise measurement, their scientific authority was augmented and assured, while their stark images prompted viewers to form lasting impressions of racial superiority. The visual allegory of the evolutionary ladder that these scientific photographs collectively suggested was reinforced by the many booklets of commercial photographs of Indian peoples that were available for sale to the visitors on the Midway. Even the fair's anthropologists saw no conflict between science and commerce where

photographs were concerned. Boas persuaded the fair's directors to hire a Chicago photographer to produce images of Kwakiutl dances by arguing that reproductions could be profitably sold to fair-goers [Hinsley 1991: 349].

World's fairs presented anthropologists with unparalleled opportunities to collect large amounts and varieties of anthropometric data within the safety of an environment that they created and controlled. At least one frontier photographer was ambushed and killed despite army protection [Maxwell 1999: 105]. It is not surprising, then, that the Indian encampment and the anthropometric laboratory coincided again at subsequent international expositions. For example, the anthropology department at the Louisiana Purchase Exposition in St. Louis in 1904 probably had the largest display of "live exhibits" ever assembled and, in "many ways, the native village constituted a semicaptive research laboratory" [Parezo and Troutman 2001: 11]. Yet the world's Columbia Exposition was to be the only world's fair at which Chippewa delegates participated substantially in anthropometric studies. Although the anthropologists in charge of research at St. Louis took some anthropometric measurements, the focus of their research was on "psychological measurements" such as "sensitiveness to temperature, delicacy of touch and taste, acuteness of vision and hearing, and other sense reactions, together with power of coordination as expressed in rapidity and accuracy of forming judgement, etc." [McGee, in Rydell 1984: 164]. Then too, as the sites of American world's fairs moved westward with the advance of the colonial frontier [Baldwin, in Rydell 1984: 105], anthropologists and entrepreneurs alike favored tribes from the Plains, the Southwest and the Northwest Pacific Coast, whose members they imagined were "pure" savages. Only 20 of the hundreds of Indian participants at St. Louis were Chippewa [Parezo and Troutman 2001: 14-15]. Representing a tribe that had survived the supposedly lethal tidal wave of the frontier, their continuing existence contradicted the master narrative of the "disappearing Indian."

At subsequent world's fairs, the "Indian village" came increasingly under the care of commercial concessions on the Midway, while state-sponsored anthropological exhibits tended more and more towards plaster casts and dioramas. For example, a Smithsonian anthropologist, Aleš Hrdlička, had charge of the physical anthropology department at the Panama-California Exposition in San Diego in 1915. The bulk of the exhibits consisted of "original specimens, charts, photographic enlargements and transparencies, models, casts, busts, and figures" [Hrdlička 1916]. To furnish the data for these exhibits, Hrdlička and his assistants conducted fieldwork in remote regions for several years prior to the fair. He intended these exhibits to "connect intimately with the exhibits of living groups" [*ibid.*]. In reality, however, the connection was merely by inference, because the fair's anthropology department had no "live exhibits." Rather, the Santa Fe Railroad and the Fred Harvey Hotel Company financed and managed the "Indian Village" on the Isthmus, or Midway, which housed approximately 200 Indians from seven different Western and Southwestern tribes [Amero 1996]. This "village" generated hundreds of commercial photographs, none of them anthropometric. Hrdlička did not conduct research on site. Rather, by the time the Panama-California Exposition opened in 1915, he had already moved on to his next project, which was an intensive anthropometric field study of Minnesota Chippewa.

FROM THE FIELD

A large portion of the anthropometric images collected during the decades around the turn of the twentieth century came from amateur and professional ethnographers "in the field." Taking photographs in the field was one of the most important strategies ethnographic photographers used to serve the scientific aspirations of anthropology. The supposed realism of photographs lent them a scientific authority that paintings and sketches lacked. The distinction between science and art was emphasized by the fact that, in the late nineteenth century, artistic photography that involved human subjects was almost all conducted in the studio setting where the photographer could have complete control of the subject [Linkman 1993: 38–39]. The major exception to this rule was the Photo Secession movement which, as the name suggests, broke off from the main body of professional photographers, arguing that realistic outdoor photography had artistic merit in the right practitioners' hands [Stieglitz 1980 (1899): 165–166; 1980 (1903)]. In the mainstream, however, settings outside the studio represented the depiction of life-as-it-happened in which the photographer exercised little control over the subject, and hence the image. Ironically, manipulation of Native American subjects in the field was a common practice which has only recently come to light. For example, John Wesley Powell, leader of the well-renowned 1873 survey expedition, hired the artist Thomas Moran to accompany him in order to arrange photographic subjects in suitably picturesque poses. In one instance, the expedition photographer John Hillers took a photograph of a Paiute woman wearing a White River Ute dress that Powell had brought into the field from the Smithsonian collections. The accession label is visible in the photograph on the bodice of the dress [Fleming and Luskey 1986: 109, 133–134].

Powell's desire to produce artistic effects with scientific authority is indicative of his perhaps intuitive understanding of the influence of visual genres on viewers' perception of "reality" in ethnographic images. As was the case with the relationship between anthropometric studio photography and painted portraits, nineteenth-century viewers "saw" ethnographic field photographs within the context of established Western painting traditions. In particular, dances, dwellings, villages, and occupations, which were prevalent themes among ethnographic painters such as Paul Kane, George Catlin, and Seth Eastman, were also favorite subjects among these early ethnographic field photographers. For instance, Margaret Blackman [1981: 64–65] found that houses and totem poles were the subject of 90 percent of 236 photographs that were taken in four Haida villages between 1878 and 1908. The remaining 10 percent focused on "traditional" occupations and ceremonial dress, as well as individual and group portraits. In the same region, Franz Boas and his prime informant George Hunt photographed parts of the Kwakwaka'wakw (Kwakiutl) winter ceremonial [Fleming and Luskey 1986: 142; Jacknis 1992: 146–150]. The latter also helped Edward Curtis capture Kwakwaka'wakw ceremonies, dress, houses and villages in his 1914 film, *In the Land of the Head-Hunters* (re-released in 1975 as *In the Land of the War-Canoes*) [Jacknis 1992: 144–145].

The physical properties of photographs provided another reason why they served the scientific goals of the emerging discipline of anthropology. Because

photographs were transportable and reproducible, particularly after the introduction of the Kodak box camera in 1888 [Banta and Hinsley 1986: 30], they were a perfect medium through which field-workers could "bring home the field" to the "armchair scientists." The structure of ethnographic work was very different from what it is today. First, in North America, there were very few employment opportunities for professional ethnologists. Hence, a small number of professionals relied largely upon amateur and aspiring "fieldworkers" to supply them with raw data from the field. The professionals then attempted to synthesize the data into broad comparisons and generalizations. This synthesizing process was considered the mark of a "true science" [Hinsley 1981: 154-155]. Furthermore, although such "scientists" drew a distinction between "ethnology" and "physical anthropology" in terms of theory and methods, often fieldwork and written reports attempted to treat particular "cultures" comprehensively.

Perhaps because "arm-chair anthropologists" often depended upon the vicarious experience of viewing photographs, they encouraged amateur field photographers to capture as much scientifically serviceable data on film as possible. At least in part, fieldworkers' credibility and opportunities for advancement depended upon their facility at this task. Hence, in direct contrast to the trend towards context-free images that had been developing in anthropometric studio



Figure 6 "Ojibwas near Saginaw Mich., 1894" by Harlan Smith. [Courtesy of National Anthropological Archives (2002-15833).]

photography, field photographers often attempted to combine both anthropometric and ethnographic data in single images.

In 1894, Harlan Smith was an amateur fieldworker. He took the photograph shown in Figure 6 near Saginaw, Michigan, and sent it, along with other materials he had collected, to the Smithsonian in hopes that he would be remunerated and/or recognized for his contribution. To that end, he attempted to produce field photographs as he understood the visual genre. As he explained in a letter to William McGee at the Smithsonian, "I am trying to photograph each habitation and the full face and profile of each individual. Besides this I hope to photograph groups and individuals at their occupations enough at least to fully illustrate each occupation . . ." [Smith 1894]. Although Smith specifically mentions his goal to photograph individuals, this family portrait is within the mandate for the anthropometric photography of the day. For example, in his textbook on anthropometric methods, Aleš Hrdlička [1947 (1906): 62], the reigning authority on the subject, encouraged fieldworkers to gather images of entire families. Even though Smith's image [Figure 6] employs the full-front pose of the scientific visual genre, however, it does not appear anthropometric to contemporary viewers because cultural data such as dress and dwelling dominate the image. I suggest that one reason contemporary viewers do not "see" this photograph with reference to anthropometry is that, if they are aware of this genre of photograph at all, they tend to associate it with the Victorian scientific visual genre of context-free specimens that is characteristic of the anthropometric studio portrait. They do not associate it with the combination of ethnographic and anthropometric elements characteristic of a certain visual genre of early field photography, because these were not the images the ethnologists chose to analyze, discuss, and publish in connection with anthropometric studies.

Perhaps more significantly, Figure 6 does not appear scientific because the cultural data it "captures" tells the wrong storyline for acceptance into the body of ethnological and anthropometric data of its time. Although the portrait is "scientific" in terms of the full-front pose, and "realistic" with regard to the documented details, the image is not "realist" enough to conform to the accepted and expected visual allegories. As previously noted, ethnographic photography in the latter half of the nineteenth century was dominated by the visual allegories of the "disappearing race" and "civilization's progress in America." In the context of education conducted under their control, government and church officials promoted "assimilation," which was a form of the "disappearing race" master narrative which favored "killing the Indian, but saving the man." These agencies produced "before-and-after" photographs to prove the "progress" of their wards and to garner public support [Dippie 1992: 44–56]. The public, however, took a dim view of "civilized Indians" when they were successfully competing with "whites" in the mainstream economy. Rather, most of the new inhabitants of the land preferred master narratives in which "disappearance" entailed removal of "the man" and relegating "the Indian" to a romanticized past. Similarly, in their attempts to "salvage a dying race," "armchair anthropologists" and fieldworkers sought ahistorical depictions of quaint and "picturesque," or exotic and "savage," symbols that typified "traditional" cultures, rather than historically accurate depictions of actual people's lives. In contrast to versions of the "disappearing Indian" visual allegory preferred by anthropologists and the

public, the fashionable, neat and clean clothing of the subjects in Smith's family portrait, as well as their wood-paneled house with pane windows and shady porch, all suggest their successful adaptation to changing historical circumstances. Perhaps these characteristics explain why anthropologists at the Smithsonian never selected this image for publication, nor was a negative of it ever obtained from Smith or made from the print.

As with photographic portraiture, one must consider the social context of the photographic encounter between ethnographic field photographers and their subjects. With regard to Figure 6, most Michigan Ojibway already knew the conventions for the visual genre of Victorian and Edwardian photographic family portraiture. Many of those who worked in the lumber and railroad industries had family portraits taken in the photographic studios of the local towns [McClurken 1991: 65]. With the exception of having been taken out-of-doors, Figure 6 fits so closely with this genre that it seems likely that Smith's Chippewa subjects posed with that visual genre in mind. Hence, contrary to the expected roles of either the portrait or field photographer, these Chippewa subjects would appear to have exercised more control over the image than did this amateur field photographer. It is possible that they allowed him to take their picture on condition that they received copies which conformed to their expectations and requirements.

Also by the 1890s, the postcard industry was already booming and there was a high commercial demand for Indian images. Before Kodak introduced the box camera in 1888, these images had been produced mainly by professional photographers. By this time, however, railroad access brought tourists with their own box cameras into Native communities. According to Pauline Colby [1937: 72], a missionary at Leech Lake around the time of the Bear Island War, Native people knew their worth as photographers' subjects:

Some of our visitors are a bit more inquisitive than polite and invade the cabins and wigwams of the natives armed with their cameras, and are astonished when they are met with averted faces. [They told me,] "You go in and tell them we want some snap shots of their every day home life, just as it is, you know them and we don't." "Yes," I responded as gently as I could, "I know them and I know they are not fond of posing as models unless there is an honorarium attached to the event." "Do you mean they want money just for letting us get a snap shot of them?" "Yes, that's the case, I don't know where they learned that artists' models are always paid for posing, but they do know it. You must remember that some of these people have traveled in Wild West Shows, and Medicine Shows all over the States, Canada and Europe and have a fair notion of their value as picturesque advertisements."

Another reason why Smithsonian anthropologists ignored Smith's image is that they, as well as members of the public, viewed ethnographic photographs that portrayed families with their dwellings with reference to similar visual genres of Euro-American portraiture that were popular subjects for the *carte-de-visite*, stereoscopic and postcard images that people traded and collected avidly. In particular, North American photography often employed family portraits in front of dwellings, from pioneer "homesteads" to large permanent urban or rural homes, to tell the story of colonization. The types of dwelling represented in



Figure 7 Pioneer family in front of their sod house with buffalo skulls on roof. [N/d, photographer and place unknown. Courtesy of the Department of Archives and Special Collections, University of Manitoba (PC7-122).]

these images were particularly salient symbols of the successive phases of conquering the wilderness.

The initial phases of this "colonization" visual allegory were depicted in a visual genre that showed some humbly dressed families in front of log cabins, "soddies," or tar-paper shacks. These dwellings symbolized their owners' conquering of the elements and their perseverance against all adversities, which included the supposedly hostile Indians whom they were displacing. This theme is especially apparent in the numerous photographs in this genre in which buffalo skulls are proudly displayed on or near the threshold of the "homestead" [Figure 7]. In his thorough analysis of depictions of buffalo skulls in American painting and photography, Dippie [1992: 49–55] suggests that these images "were readily interpreted by Americans who linked the fate of the decimated buffalo herds and the Indians, an idea embodied in the buffalo-Indian head nickel (1913–1938) designed by Fraser, sculptor of *The End of the Trail*." Because the visual allegory of "Civilization's progress in America" prescribed that Indians should not live in more civilized homes than those of the conquerors, this frame of reference undermined both the commercial popularity and the scientific credibility of Smith's anthropometric family portrait [Figure 6].

The concluding phase of the "colonization" visual allegory materialized in the form of portraits of Anglo-American families in front of their large, stylish and



Figure 8 Photographic Postcard: House with Family, c. 1900. [Photographer and place unknown. Author's collection.]

permanent dwellings. The example given in Figure 8 is a photographic postcard taken in about 1900. The family homes represented in these photographs were usually large two-storied buildings whose architecture symbolized wealth, prosperity and progress. When this visual genre served as a frame of reference, the dwellings depicted in portraits of Native families, which were ideally transitory structures such as teepees and wigwams, indicated a lower stage of development along the evolutionary line of progress.

In contrast to Harlan Smith, Aleš Hrdlička was a world-renowned professional anthropologist who worked full-time at the Smithsonian and occasionally took to the field himself. By 1915, when he took the photograph depicted in Figure 9, the practice of anthropometry was firmly established as a respectable and authoritative science. Following the Clapp Rider legislation, which allowed "mixed-bloods" at White Earth, Minnesota, to sell their individual land allotments, the government launched an investigation into allegations of widespread fraud [Meyer 1994: 142–172]. In connection with subsequent legal actions against the new owners of the disputed land, the government hired Hrdlička to conduct an anthropometric study to determine the blood status of 696 individuals [Hrdlička 1916: 200].

Hrdlička characteristically photographed his subjects outside, usually against a background of fields and trees. This practice retained the starkness of the scientific visual genre, while at the same time emphasized that it was a real-life event captured on film. His advice to students suggests that this was a matter of necessity rather than of choice: "Photography... may have to be done by the roadside, in



Figure 9 "Chippewa full-blood (right) and mixed-blood (left), White Earth," by Aleš Hrdlička, 1916. [Courtesy of the National Anthropological Archives (2002-15832).]

the field, or under other untoward circumstances, which will often call for the exercise of not a little ingenuity . . ." [Hrdlička, in Banta and Hinsley 1986: 57]. Nevertheless, his "natural" and uncluttered settings enhanced the scientific authority of his images by contrasting them with commercial and artistic studio portraits. This particular photograph [Figure 9] was published in Hrdlička's report on the physical characteristics of the full-bloods, who he concluded comprised only 8 percent of the total number of subjects he examined (59 out of 696) [*ibid.*: 201]. The text of his publication never refers directly to the anthropometric

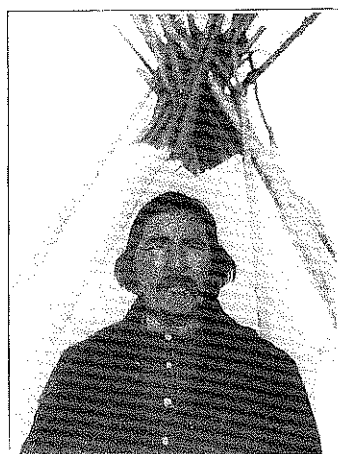


Figure 1
Typical French-breed
About one thirty-second white

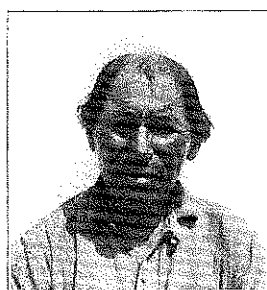


Figure 2
Typical mixed-blood
Probably about equivalent with white
Head breadth 159.0 mm.
Fore breadth 152.4 mm.
Face-breadth head-breadth index . . . 95.91 per cent

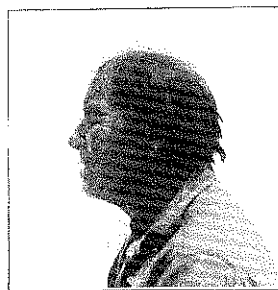


Figure 3

Figure 10 "Plate D," In Jenks, Albert, 1916, *Indian-White Amalgamation: An Anthropometric Study*. Minneapolis: University of Minnesota. [Courtesy of the Department of Archives and Special Collections, University of Manitoba.]

photographs that illustrate it. Instead, short captions tell the blood status of the subjects. This one reads, "Chippewa full-blood (right), and mixed-blood (left), White Earth."

While Hrdlička worked for the government, the defense lawyer hired Albert Jenks of the University of Minnesota to conduct another anthropometric study. Hrdlička and Jenks apparently worked together closely in the field and both came to the conclusion that there were very few pure-bloods at White Earth and therefore almost all of the disputed land sales were legitimate [Meyer 1994: 168–169]. Whereas Hrdlička's publication concentrated on the full-bloods, Jenks' publication [1916] was devoted to the identification of mixed-bloods. To this end, he published photographs not only of mixed-bloods, but also of a

"pure-blood French man" and a "pure-blood Scotch man." Jenks did not take the latter two portraits himself. In contrast to the anthropometric photographs of the mixed-bloods, they show the three-quarter view of the visual genre of portraiture.

Unlike Hrdlička, Jenks does occasionally refer to the photographs to illustrate a point he has made in the text. In Plate D, reproduced in Figure 10, for example, he draws our attention to the balding of the mixed-blood man in (his) Figures 2 and 3. Believing balding to be a trait of the white race only, anthropologists considered balding among Indians as a sure sign of "white blood mixture." Similarly, the man in (his) Figure 1 illustrates the trait of facial hair, which supposedly does not occur in the pure-blood Indian. The captions help to transform the subjects of the photographs into scientific specimens that illustrate racial types: "Typical French breed: About one thirty-second white," and "Typical mixed-blood: Probably about one-sixteenth white." In addition, as previously discussed, portraits of people in front of their dwellings were visual allegories that referred to the master narratives of evolution and the triumph of civilization. In this case, the teepee in the background of (his) Figure 1 emphasizes that this specimen is 68 percent savage, despite his moustache. In the context of the land claims court cases, such representation had dire consequences.

The two anthropologists themselves believed that, as scientists, they were purely objective and free from bias. Although on opposite sides of the court case, they agreed on blood rulings and their testimony carried enough scientific credibility to become the basis of the tribal membership role that remains in place today [Meyer 1994: 170]. The scientific authority of the photographs, however, did not detract at all from their commercial appeal. On the contrary, dozens of Hrdlička's photographs somehow ended up on picture postcards. It is quite possible that Hrdlička and other anthropologists sought to raise money to fund their research by selling their photographs. Funding for research was very scarce during the few decades before and after the turn of the twentieth century, in part because the governments were the main providers and their funding depended largely on the degree to which the study had practical applications for policy. In this case, the blood rulings relieved the government of a huge amount of fiscal and social responsibility in the short term. In the long term, however, the loss of tribal land resulted in poverty and social disintegration whose repercussions are still being felt today.

Regardless of the outcome, the use of anthropometric photography to resolve the Clapp Rider controversy is a perfect illustration of John Tagg's [1988: 8–9] account of the role of photography in the emerging state's "techniques of surveillance." Yet the iconic imagery of Hrdlička's photographs was not confined or controlled by the institutions that created them. Rather, these photographs illustrate the extent to which "meaning in photographs, generated by viewers, depends on the context of their viewing, and their dependence on written or spoken 'text' to control semiotic energy and anchor meaning in relation to embodied subjectivities of the viewer" [Edwards 2001: 14]. To early twentieth century viewers, both Hrdlička's and Jenks' photographs served as authoritative representatives of "racial types." Yet their commercial appeal was not in the specific "types" they represented, nor in the particulars of the court case with which they were associated, but rather in their



Figure 11 "Kibega'bo (consumptive)," Lac Seul, Ontario, by Frederick Waugh, 1917. [Courtesy of the Canadian Museum of Civilization (36793).]

embodiment of the visual allegory of "civilization's progress in America," which is implicit in the appropriating gaze of the postcard owner.

After the establishment of the Anthropology Division within the Geological Survey of Canada (GSC) in 1910, the Canadian government also began to sponsor ethnological research. The photograph of Kibega'bo in Figure 11 was taken in

1917 by Frederick Waugh, an amateur fieldworker who, after several years of conducting contract work, became employed full-time by the Anthropology Division, which has now become part of the Museum of Civilization. He remained primarily a fieldworker, however, amassing a huge collection of photographs and field-notes, but rarely publishing anything. The image in Figure 11 is ambiguous for a number of reasons. Although Kibega'bo's body is positioned directly towards the camera, the position of his face follows the Victorian preference for the three-quarter view with his eyes following the direction of his head [Linkman 1993: 46]. The anthropometric intent of this image is evident only in conjunction with a companion photograph that shows Kibega'bo's full-profile. Additionally Kibega'bo's poverty is represented here by his thread-bare sweater, slight frame draped with baggy clothes and his parted lips, which suggest hunger and want. The impression of scarcity and need is emphasized by the caption, "consumptive," which suggests that he is also ill. This form of "realism" represents a new phenomenon in ethnographic photographs. By World War I, anthropologists were occasionally adopting the stark realism of reform photography which, beginning in the 1890s, showed the poverty and disease that Victorian photographers had studiously avoided [Holt 1982: 287].

This trend represented a shift in the master narrative in recognition of the fact that Indians were not quietly and neatly disappearing, as previously assumed. Rather, they were hanging on indefinitely. Members of the public began to perceive their survival as a burden upon public funds resulting from visible manifestations of social and economic disintegration. As Edward Bruner [1986: 141-142] notes, the prevalent master narrative of Native history during the 1930s was of a "once proud people whose spirit had been broken and who would soon become assimilated into what was then called the 'mainstream of American life' (...). Given this 1930s vision of the future and the convention of reconstructing the 'aboriginal' past as an integrated culture, the present could only be interpreted as disintegration, framed as it was by both glorious integrity and eventual disappearance." Bruner [*ibid.*: 151-152] further explains that new master narratives may arise through incremental changes in the individual representations, or through rapid change when a new narrative is envisioned because "the old narrative can no longer be stretched to encompass the new events." This occurs when there is a "radical shift in social context."

The photograph of Kibega'bo represents an incremental change in the master narrative and visual allegory of "the disappearing Indian." Incremental changes to master narratives entail concomitant changes in visual allegories. During the latter half of the nineteenth century, with the exception of assimilationist propaganda, visual representations conventionally avoided images of the present. This was true whether they depicted disintegration or assimilation, as in the case of Harlan Smith's family portrait. Instead, the visual allegory attached to the master narrative of "the disappearing Indian" ideally referred to the romantic past. As previously noted, this preference for images of the romantic past actually detracted from both popular and scientific interest in images of the Chippewa because they almost invariably included some symbols of assimilation. Both popular and scientific audiences of this period favored images of the Native nations of the American West whose life-ways could still be represented as "pristine cultures."

As Hrdlička's anthropometric photographs illustrate, if the "wilderness" appropriately filled the background, then viewers could ignore symbols of assimilation such as "citizen's dress" and focus instead on physical traits. As noted previously, however, it had become desirable to include ethnological context in anthropometric photography. For this reason, field photographers attempted to satisfy the needs of anthropometric field photography at the same time as documenting subjects of ethnological interest. In particular, the visual genre in which Indian subjects were photographed in front of indigenous dwellings had become increasingly popular after the turn of the twentieth century.

Westerners had long been fascinated with images of buildings, both from Western civilization and "exotic" cultures. Indian encampments were popular themes among painters such as George Catlin, Paul Kane, Seth Eastman and Peter Rindisbacher. As discussed above, the original genre of the "family home" was very popular in the late nineteenth and early twentieth centuries. Around the same time images of large public buildings reached a peak in popularity. This was a time of economic expansion and optimism regarding the technological achievements of Western civilization. In his analysis of the photographic record of Chicago, Glen Holt [1982: 281-285] notes that images of architectural achievements abounded. As symbols of the visual allegory of "civilization's progress in America," they became very popular collector items as *cartes-de-visite*, stereoscopic views and postcards, as well as in limited-edition photographic albums [Figure 12]. This audience drew an implicit comparison between these architectural images and those of Native peoples, with the result that the latter inevitably appeared deficient. The ethnocentricity of their perception is revealed when one considers how Native



Figure 12 Postcard: The Hudson's Bay Company Retail Store, Winnipeg, Manitoba, c. 1927. [Author's collection.]

people may have viewed similar comparisons of technology. For example, Pauline Colby [1937: 71] was baffled when her Native companions did not appear to be impressed when they were taken with a group of people to inspect the new dam built near Leech Lake Reservation in the late 1890s:

I have never heard any of our Indian friends express either curiosity or admiration for the inventions and accomplishments of the white man, and although all the white people of the party were loud in their praises of the dam, the Indians gazed at it with seeming indifference . . . They must surely be more or less impressed when they compare a steamboat with a canoe, a modern house with a wigwam or even a waterproof rubber boot with their moccasins, but I've never heard them say that our ways and means were an improvement on theirs.

Colby, who lived and worked among Native peoples for several decades, did not realize that canoes, wigwams, and moccasins were perfectly suited to their traditional way of life, which involved semi-nomadic residence patterns in which many situations demanded leaving no trace of one's occupancy. These life-ways were also guided by the principle of reciprocity between and among humans and natural phenomena. From this point of view, steamboats, modern houses, rubber boots, and especially dams, are not only impractical because they are bulky, noisy and/or leave a permanent mark on the environment, but they are also contradictory to the practice of reciprocal relations with the natural environment. The postcard of the Hudson's Bay Company store represented in Figure 12 symbolizes not only the triumph of civilization in terms of technology, but also celebrates commercial success and expansion. It is a particularly poignant point of comparison with Kibega'bo's "primitive" tepee and impoverished appearance, since the Ojibway of Northwestern Ontario were virtually dependent upon their trading relationship with the Hudson's Bay Company during this period.

CONCLUSION

Anthropometric photographs from 1890 to 1920 frequently embodied the tension between the need for scientific authority and the need for images to tell the "right" story. Although in retrospect, we can see that the lines distinguishing science from art and popular culture were far from clear cut, the photographic image carried unquestionable scientific authority at the time, as long as the photographer employed appropriate visual genres and allegories. Although anthropometric photographs that employed scientific visual genres were not immune to popular appropriation, they did not lose their scientific authority thereby. Conversely, however, anthropometric photographs that did not employ sanctioned visual allegories were neither scientifically credible, nor popular among the public.

This is an episode in the history of anthropology that most anthropologists would like to forget. The whole project of anthropometric anthropology at the turn of the twentieth century is abhorrent to us today. Since scientific paradigms and master narratives have shifted, the racism inherent in these images clearly

reveals the fallacy of their scientific pretensions. In fairness to physical anthropology, however, the actual anthropometric measurements collected at that time have applied uses in forensic and medical anthropology today that meet contemporary ethical imperatives and satisfy societal needs. Neither the practical applications of these anthropometric photographs nor their popularity, however, have survived beyond the era in which visual allegories of evolution and the "disappearing Indian" were relevant and plausible.

Edward Bruner [1986: 143–145] notes that after World War II a completely new master narrative began to permeate life experience and its representations. This new narrative, which came to dominance in the 1970s, portrays the Indian as victim and/or agent. It represents the course of Native history as a sequence of "past oppression, present resistance, [and] future resurgence." Now that Native resurgence is becoming an ever widening field of Native experience, the newly emerging master narratives of "self-determination" and "resistance" are becoming more pervasive. These new narratives suggest models of social relations that often compel ethnographic photographers to make incremental changes to their enactments of photographic encounters in response to the growing degree of power exercised by contemporary Native peoples. This case study of anthropometric photography among the Chippewa shows the power of master narratives to define "reality" and thereby to set academic agendas and over-determine interpretations. Visual genres and allegories provide windows through which we can analyze the effects of master narratives on our past and present representations of "reality." After World War I, however, photographic evidence became highly suspect in the discipline of anthropology, and has remained so until today, despite occasional exceptions [Collier and Collier 1986: 10, 12; Pinney 1992: 81]. Perhaps it is time to consider again the uses of still photography and visual analysis to interpret, represent, and influence the changing relationships between Native and non-Native peoples.

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