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GRANTING HISTORICITY TO SCIENTIFIC OBJECTS: THE ANALYSIS OF THE LIFE HISTORY OF "THE OUTERMOST ORDER OF THE MUSCLE, BACK VIEW"

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Scientific objects, like human beings, have their own stories. As Arjun Appadurai discusses, things like people have social lives and hence the examination of their lifespans can reveal the social and human contexts surrounding them. Appadurai puts forward the argument that "[w]e have to follow the things themselves, for their meanings are inscribed in their forms, their uses, their trajectories. It is only through analysis of these trajectories that we can interpret the human transactions and calculations that enliven things" (1986: 5). In a similar vein, this article aims to examine the biography of a scientific object, that is Bernhard Siegfried Albinus' anatomical picture, "The Outermost Order of the Muscle, Back View", to reveal how different meanings are attributed to the same object in diverse times and places by different scientists. The article follows the long 'travel' of this scientific object from Albinus' book *Tabulae Sceleti et Musculorum Corporis Humani* to Diderot and d'Alembert's *Encyclopédie* and then to Şanizade's *Miratü'l-Ebdan fi Teşrih-i Azaü'l-İnsan* with the goal of illuminating its transformation process. It argues that scientific objects travel through time and space not necessarily with the "ideas" they had been constituted with. In other words, throughout their travel, scientific objects might break up with their original systems of values, beliefs and ideas, and continue their ways alone until they are appropriated by different scientists in various contexts. As they move from one place to another, they are stripped of the ideologies previously loaded on to them, and their movement into and out of different categories would "illuminate their human and social context" (Appadurai, 1986: 5).

Tabulae Sceleti et Musculorum Corporis Humani

Bernhard Siegfried Albinus, who was the professor of anatomy at Leyden University, completed his prominent anatomical book, namely *Tabulae Sceleti et Musculorum Corporis Humani* in 1747 after twenty two years of study. Albinus examined the human body through dissection and worked in collaboration with a Dutch artist, Jan Wandelaar, who drew the pictures of the body. As forms of organs were distorted with deeper dissections, Wandelaar confronted several problems to create accurate drawings. To solve such kinds of

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obstacles, Albinus decided to use a skeleton as a basic reference for anatomical drawings with the goal of producing exact visual accuracy. Albinus stated:

> what I wanted was something more than even the best anatomists trouble their heads about, it being usual for them to make only random figures of the parts, without considering either the order, dimensions, continuations, or connections of them with one another (quoted from Hale and Coyle, 1998: 16).

First, the skeleton was held up with cords and the pelvis perched on a metal tripod. The skeleton posture was adjusted until it assumed the right posture. Then, Albinus found a slim man, the same size as the skeleton, and made him stand next to it. He compared the skeleton with him, "especially the hip bone, spine, thorax, scapula, and clavicles; because if these were put into proper positions, there would not be any great difficulty in the rest" (ibid).

In order to get the right proportion in the drawings of the artist, Albinus used grids made of cords divided into squares. The grids were put at different intervals between the artist and the skeleton, and the artist looked through them to have the most accurate perspective of the skeleton. In this way, the artist could picture the specimen with a square-to-square correspondence. Wandelaar began to draw the skeleton from a distance of forty feet and then moved closer to add the finer details. When the drawings were completed, they were reduced and engraved on copperplates.

Albinus did not give reference numbers to the drawings. Instead, he inserted an exact outline of the original drawing on an adjacent page where he explained the names of muscles and bones with numbers. This was an innovation in anatomical illustration (ibid). Moreover, with Wandelaar's suggestion, Albinus decided to have landscape backgrounds behind the anatomical pictures with the aim of giving the impression of three-dimensional reality to the plates (Fig.1). Also, the addition of "idyllic scenery and the rhinoceros, a parklike landscape and classical architectural elements" was intended to make the figures appear more pleasant (Hildebrand, 2005: 561).[1]

It is clear that Albinus put a lot of thought into drawing bodies. Not only did he aim to provide an accurate but also a perfect image of the body. Briefly put, the perfect image would be the "ideal" and "typical" illustration of the body, which was of course determined by Albinus.[2]

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1 Nevertheless, Albinus highly restricted Wandelaar's artistic attempts to reach his notion of perfect image of the bodies (Hildebrand, 2005: 559).

2 For example, in the preface of the book *Albinus on Anatomy*, Hale and Coyle (1998) suggest that "this book is primarily for artists". In the section, "Drawing the Figure", Hale advises artists to create in their minds their own personal image of the human figure. He continues: "nobody knows what a normal human figure really is. So it is your responsibility as an artist to create a personal image, or Secret Figure, out of

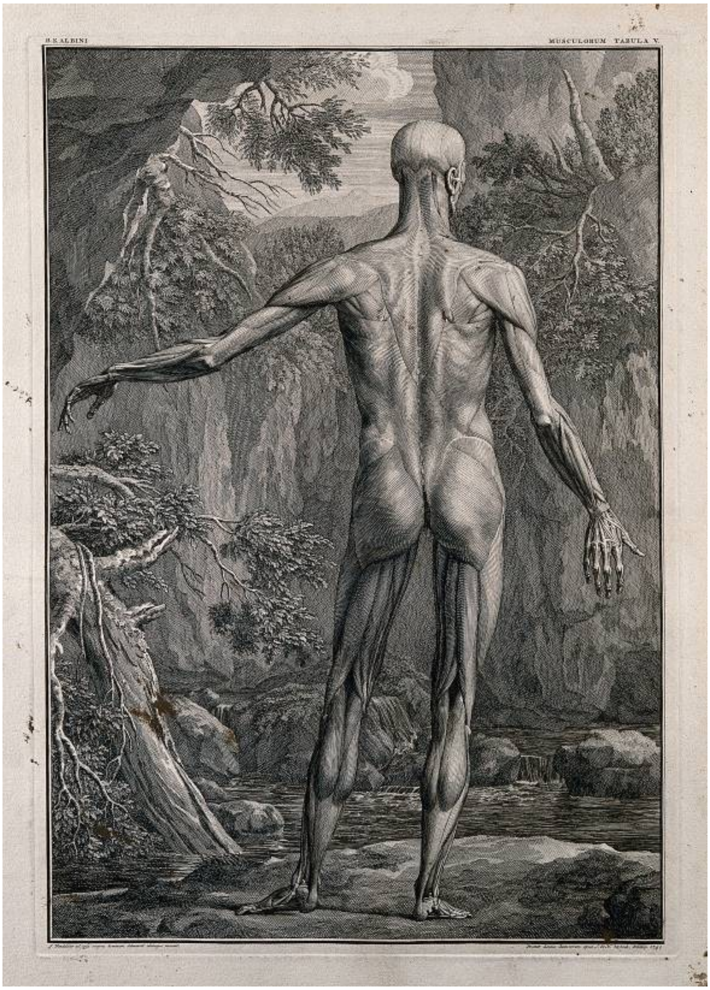

Fig. 1. “The Outermost Order of the Muscle, Back View”, in Albinus, Bernhard Siegfried, *Tabulae Sceleti Et Musculorum Corporis Humani*. Londini: Typis H. Woodfall. Impensis Johannis Et Pauli Knapton.

Being very well aware of the fact that “nature is full of diversity, but science cannot be” (Daston and Galison, 1992: 90), Albinus believed that he must choose his own images out of many, according to how they should be rather than how they are in nature. In other words, Albinus’ attempt was to create a

your imagination in any position or aspect […] Of course, you will make changes here and there to conform with certain abnormal characteristics of the individual model since there is no way to perceive or measure those abnormal characteristics unless you can compare them with what you yourself perceive to be normal” (20). This quotation is significant in the sense that Hale’s ideas of drawing human illustrations are exactly the same as the ideas of Albinus. They both believed in the “Secret Figure” in their minds, rather than the “real” bodies in nature.

"working object"[3] (ibid: 85), which might or might not exist in nature. His goal was to create his own "working objects" according to normative principles, which would be a reference point for the standardization among the plentiful and too various bodies in nature.

Albinus chose his sample skeleton according to his ideal image of the body. He selected a skeleton "of the male sex, of a middle stature, and very well proportioned; of the most perfect kind, without any blemish or deformity"; "all the parts of it beautiful and pleasing to eye. For as I wanted to shew an example of nature, I chused to take it from the best pattern of nature" (ibid: 90). He selected a skeleton that showed all signs of strength and agility, one that was elegant but at the same time not too delicate, that showed neither juvenile nor feminine roundness and slenderness nor uncouth roughness and clumsiness (Hildebrand, 2005: 558). Nevertheless, even in this "beautiful and pleasing to the eye" skeleton, not everything was so perfectly built, and Albinus had to use parts from other skeletons in order to create his "homo perfectus".[4]

Albinus looked for a universal image of a perfect body through a meticulous examination of particular examples, which met his notion of ideal proportions, forms and position. He had to decide what to be portrayed and how, according to his own judgments and interpretations. The careful measuring and drawing of many specimens over a period of years would allow him to produce a picture illustrating an "anatomic norm".

In the following century, this idea of the scientist's interpretation would subsequently be abandoned by successive atlas makers. As Daston and Galison (1992) discuss, in the mid- and late nineteenth century, the concerns about accuracy and objectivity in representing bodies came into conflict. Unlike Albinus, the atlas makers started to believe that only particulars were real and thus must be represented with all their imperfections. They, like Albinus, must choose their images among a variety of resources, but this time they felt the anxiety of falling into the temptations of their subjective perspectives. For them, the images must be represented as they are, rather than how they should be.

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3 Working objects are simply standardized representations of things that can be replicated and circulated, which would allow scientists to be in conversation with one another. "Working objects can be atlas images, type specimens, or laboratory processes - any manageable, communal representatives of the sector of nature under investigation. No science can do without such standardised working objects, for unrefined natural objects are too quirkily particular to cooperate in generalisations and comparisons" (Daston and Galison, 1992: 85).

4 Hildebrand points out that "homo perfectus" is not used in Albinus' texts but a concept coined by Punt (1983). "Sceletum virile perfectum" and "sceletum foeminimum perfectum" were the terms used by Albinus.

Encyclopédie

When Albinus' book was published in 1747, it became a scientific object ready to travel in different times and spaces. It turned into an "immutable mobile" in Bruno Latour's words (1990: 26).[5] The images in the book could simply move to other locations without changing during their travel, and they could be compared with other inscription registrations. The images were made flat and their scale might be modified, if desired, without any change in their internal proportions. With the printing press, they could be reproduced easily at a cheaper cost. The mobilization and immutability of these inscriptions made other scientists copy and use them in their own books. In that sense, there are many different journeys of Albinus' images, as they have been used within an ample range of books, one example being their reappearance in the *Encyclopédie* of Diderot and d'Alembert.

In addition to some The *Encyclopédie*, as a product of the "Age of Enlightenment", was a "vast pedagogical project whose aim [was] to teach everything" (Creech, 1982:183). Containing 72,000 articles written by more than 140 contributors, the *Encyclopédie* was a massive reference work for the arts and sciences. The project was launched in 1745 and finished in 1772. It was published in 17 volumes of text and 11 volumes of illustrations.

The *Encyclopédie* was a product of a collaborative work. While some people were invited to write about their expertise subjects, others volunteered information and some wrote just for the *Supplement*. However, Diderot in the end expressed strong regret that the contributors had not been selected carefully:

> excellent writers, there were others who were weak, mediocre, and totally incompetent. A jumbled work resulted, where a schoolboy's rough draft is found next to a masterpiece, a stupidity alongside something sublime, a page written with force, purity, passion, judgment, reason, and elegance on the back of a page that is poor, trivial, dull, and wretched (quoted from Kafker, 1973: 452).

Diderot had several debates with d'Alembert about the selection of contributors for the *Encyclopédie.* He had concerns about whom and what to choose among many writers, articles and illustrations. Like Albinus, Diderot had the issue of choosing and constituting "working objects" for the *Encyclopédie.* The selection of scientific objects from among many others and then the standardization of these as the representatives of other objects would result in the constitution of concepts, as Daston and Galison argue (1992: 85).

5 The concept of the "immutable mobile" refers to the translation of "material substance into a figure or diagram" (Latour and Woolgar, 1979: 51). Objects such as maps, diagrams, record tables, and data lists can be enlisted as immutable mobiles, which remain stable while they travel to other locations. In other words, they are "mobile but also immutable, presentable, readable and combinable with one another' (Latour,1990: 6).

In this respect, the *Encyclopédie* exemplified the ways in which concepts were constituted. The book's order was determined by the alphabet, through which concepts were attached to words. According to Diderot:

> If we could define [words] according to unchanging nature, and not according to human conventions and prejudices which change continually, such definitions would become seeds for discoveries. Let us observe here again the continual need we have of an unvarying and constant model to which our definitions and descriptions might refer, such as the nature of the man, of animals or of other beings always extant (quoted from Creech, 1982:185).

Diderot's goal was to establish a "permanent model" which the future generations would be able to utilize. In this sense, his ideas in designing an encyclopedia were based on normative as well as epistemological questions. He was not only looking for the "working objects" for his own book but at the same time, and more importantly, was trying to create the *Encyclopédie* as a "working object" *per se*. The *Encyclopédie* would fix the knowledge before it was going to fade away. It would offer a common and constant measure, which would be everlasting. Therefore, the *Encyclopédie* was more than just an attempt at representing the representations of other people; rather, it was a search for an epistemological question about how to learn and how to know.

Pierre Tarin was in charge of the anatomy section of the *Encyclopédie.*[6] Tarin included 33 plates from various atlas makers, such as Haller, Drake, Deverney and Senac. He chose 4 plates from Albinus. Two of them were the illustrations of muscles and bones of foot and hand. The other two were "The Outermost Order of Muscles", front and back views. However, these anatomical illustrations were not exact copies of Albinus' drawings. The first main difference is the change in the landscape background (Fig. 2). Wandelaar's trees, rivers, and rocky places were now replaced by a piece of land and bushes on the right side of the picture. It is clear that Wandelaar's ornaments filling up the empty spaces of the tables to give a three-dimensional reality and pleasant vision seemed unnecessary for Tarin. The second difference is the absence of the exact outline of the original drawing on an adjacent page where Albinus had explained the names of muscles with numbers. Tarin preferred to make explanations on the preceding pages by numbering the muscles on the original picture, rather than to illustrate them on an outline.

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6 There is not much information about Pierre Tarin, whose name is basically referred to a couple of times as one of the main contributors of the *Encyclopédie*. See Kafker (1963) for a detailed list.

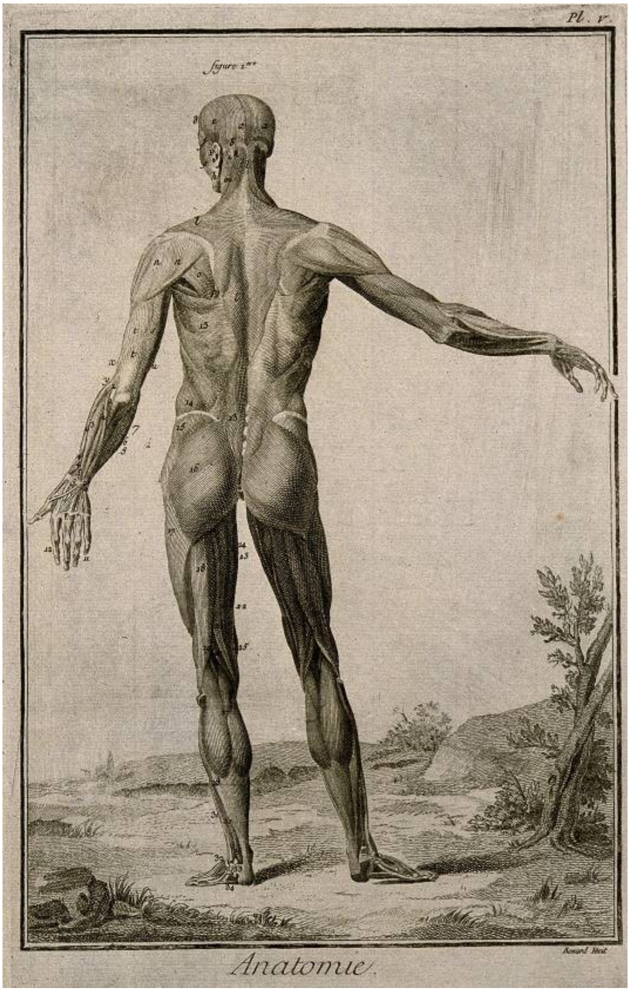

Fig. 2. "The Outermost Order of the Muscle, Back View", in Diderot, Denis and D'Alembert, Jean Le Rond, *Encyclopédie, ou Dictionnaire Raisonné des Sciences, des arts et des Métiers, par une société de gens de lettres*. Paris: Briasson, David, Le Breton, Durand.

Nevertheless, the most significant difference between these two scientific books is the way how they conceptualized knowledge. While gathering several articles, illustrations, definitions together in the *Encyclopédie,* Diderot and d'Alembert probably did not hold the same idea as Albinus. They took the illustration from Albinus but removed the ideas surrounding it by recombining and reshuffling it with other anatomy pictures. The *Encyclopédie* definitely introduced a new presentation of the knowledge of its age. According to Bender and Marrinan, Diderot did not want to treat the articles of knowledge as fragments of an idealized entity, but "as a proliferation of independent elements that, when interconnected, produce knowledge of the whole" (2010:10). Thus, the *Encyclopédie* created an open-ended process of learning through encouraging readers to pursue their interests unhindered by the editors. The cross reference system embedded in the articles allowed the readers to pursue their inquiries and combine different kinds of knowledge with each other. This new system is particularly important as it provided the readers with multiple points of view rather than one imposed perspective. The *Encyclopédie* shifted the attention from the authors to the readers and empowered the latter as active individuals who would be following their interests through making several correlations among different articles (Bender and Marrinan, 2010). Thus, unlike Albinus, who wanted to impose his "ideal" type of image over his readers, Diderot used the same image with a different purpose, as a sample from an ample range of anatomy images, which would enable the readers to develop their subjective ideas through a comparison among anatomical pictures.

Miratü'l-Ebdan fi Teşrih-i Azaü'l-İnsan

Originally sold by subscription, the *Encyclopédie* went through several editions amounting to around 25,000 copies by 1789 distributed in Europe and other continents. Russell states that copies of the *Encyclopédie* were brought to Constantinople, where numerous volumes still exist in the Palace libraries (1992: 207).[7] Therefore, it was possible for Şanizade, who was a prominent scientist known for his great contributions to Ottoman medicine, to have accessed the *Encyclopédie* in the early nineteenth century.

Şanizade Mehmed Ataullah's treatise on medicine *Hamse-i Şanizade*[8] is composed of five different parts, *Miratü'l-Ebdan fi Teşrih-i Azaü'l-Ünsan* (anatomy), *Usulü't-Tabia* (physiology), *Miyarü'l-Etibba* (internal diseases), *Kanunü'l-Cerrahin* (surgery) and *Mizanü'l-Edviye* (pharmacology). The sections on anatomy, physiology and internal diseases were all printed in the first volume of *Hamse-i Şanizade* in 1820 after a three-year publishing process. It is pertinent to note here that although the printing press was introduced into the Ottoman Empire as early as 1493 by Jewish refugees from Spain, it was not used by the Ottomans until 1726 when İbrahim Müteferrika obtained a permission to print books. Even then, only books dealing with science, language and history were printed. While in Europe secular works were considered

7 In the footnote, Russell refers to Filiz Çağman's article, where she lists the western books in Topkapı Palace. Among the works given, there are ten copies of the Encyclopédie and their dates range from 1789 to 1800. Also it is possible that when attending the Naval Engineering School, Şanizade used the Library of the Land Engineering School (Mühendishane-i Berri-i Hümayun), in which a 35-volume French book was catalogued under the title 'Encyclopedia' without citing the authors (Beydilli, 1995, p. 381, 392). The so-called volumes are probably Diderot and D'Alembert's *Encyclopedia.* I would like to thank to Feza Günergun for providing me this information.

8 Hamse-i Sanizade is generally referred as the first published Turkish medicine book.

dangerous and initially only religious books were published, in the Ottoman Empire, the situation was the reverse.[9] The belated introduction of the printing press partially explains why Şanizade's *Miratü'l-Ebdan*, which was the first Ottoman medical book including European-style body engravings, became widely known and received praise both in the Ottoman Empire as well as in Europe in spite of its non-originality. The book was not innovative since all the anatomy pictures were taken from different western sources (Kazancıgil, 1991; Russell, 1992; Zülfikar, 1991).[10] For example, Şanizade copied the skeleton figure from Vesalius, the muscle manikin from Albinus, veins and arteries from James Drake, arteries of the head from Albrecht von Haller, the vascular system and the nerves from Bartolomeus Eustachius as well as from R. de Vieussens and the ear from J.G. Duverney (Russell, 1992).[11]

Miratü'l-Ebdan was comprised of 56 anatomical illustrations that were etched on copper plates.[12] The plates were accompanied by separate explanations providing a detailed description for each part. The book started with Şanizade's claim that there was a lack of knowledge on anatomy and his book was going to fill this gap of knowledge in the area of medicine. Şanizade stated that he wrote this book as a response to those critical of "new medicine" (İhsanoğlu, 2004: ı.67; Russell, 1992: 206; Yalçınkaya, 1015: 33; Zülfikar, 1991: 37).

As usual for many books written in that time, in the preface of his treatise, Şanizade praised the Sultan, Mahmud II (r. 1808-1839), as the source of his inspiration. Indeed, the social and historical conditions of his time enabled Şanizade to incorporate western medical knowledge into his own work. The reforms initiated by Sultan Selim III (r. 1798-1808) and then pursued by

9 See Szyliowicz (1992) for details. Also İhsanoğlu explains the belatedness of printing in the Ottoman Empire referring to the testimony of Comte de Marsigli, an Italian nobleman, who visited Istanbul in 1629. According to Marsigli, it was not common to print books in the Ottoman Empire not because it was forbidden or the books were not worth printing but for the reasons of not preventing the earnings of the calligraphist whose number reached ninety thousand just in Istanbul in 1629 (İhsanoğlu, 1992:10).

10 Interestingly, none of the articles, in Hulusi Köker's edited book, mentions Şanizade's copying of illustrations from western anatomy atlases. On the contrary, Şanizade is praised for his efforts to develop Turkish medicine and ironically, not simply to imitate the western ideas: "The book [of Şanizade] completely explains Turkish surgical traditions in Turkish language from a scientific perspective. [These sort of] studies could have been regarded as connections combining Turkish medical tradition to our present. Turkish medicine then could have been developed with the western methods. Instead, we have disregarded our own scientific knowledge and copied the western knowledge" (Bilge and Gül, 1989: 56). This quotation is a good example how science has always been incorporated within the discourse of politics and national identity.

11 Also Eldem (2013) illustrates how Şanizade translated, edited and published Voltaire's (1694-1778) ideas of history that had been published in the eighth volume of the *Encyclopédie* as if they were his original thoughts. Şanizade, without citing the name of Voltaire, adjusted and thus distorted the philosopher's ideas according to his ideological perspectives.

12 Some of the illustrations were signed as "Amel-i Agop Erzurumî".

Mahmud II paved the way for the establishment of European-type schools in the Ottoman Empire, which provided the conditions for Şanizade's intellectual training. Şanizade passed through an Islamic as well as European education.[13] As a physician, he was trained at the Süleymaniye medical medrese in surgery and pharmacology, and then he was also educated at the Naval Engineering School (Russell, 1992: 207). He knew a number of languages including Arabic, Persian, Italian, and French, which enabled him to get acquainted with foreign sources. Along with his studies in medicine, he wrote on literature, history, mathematics, geography and the military.

Right after publication, a copy of the Şanizade's book was also sent to the French Embassy, where T.X. Bianchi, a French diplomat known for his French-Ottoman dictionary, had the chance to examine the work. Bianchi's commentary on Şanizade's book was published in 1821, where he proposed that this book would be revolutionary in terms of changing the Muslim way of thinking shaped by the *ulema* who resisted every kind of new ideas that were not in the spirit of the Quran. For Bianchi, the significance of the book was that "in a Muslim society where people blindly followed the religious elite who had always opposed innovation, such a work came from a member of the *ulema* itself" (Yalçınkaya, 2015: 33). Moreover, the anatomical illustrations were especially significant in the sense that they initiated a new understanding in the Muslim world in which dissection and illustration of human beings had not been practiced. Yet Bianchi added that this book would not contribute a lot to the existing medical literature for the reason that the anatomical illustrations and writings were copies and translations of the ones in European books.

Nevertheless, Şanizade's work was one of the first attempts to introduce western anatomical pictures as part of the "new medicine" in the Ottoman Empire. Like other drawings in *Miratü'l-Ebdan,* Albinus' "The Outermost Order of the Muscle, Back View" had social effects in the Ottoman Empire where dissection and picturing bodies were still not commonly practiced at the time. Rather than scientific value, the "The Outermost Order of the Muscle, Back View" had a social value as a scientific object used to represent western "scientificity". In this sense, this picture, which was developed by Albinus and then referred by Diderot, did not transport its original idea with itself while moving to Şanizade's book as a two-dimensional illustration (Fig. 3). In Şanizade's work, the meaning of the image changed and it became a marker of western knowledge. Şanizade's introduction of this European image to the

[13] Şanizade and Mustafa Behçet Efendi were considered as the two scholars who introduced the modern medical science into the Ottoman Empire. Behçet Efendi (1774-1834), the chief physician of Mahmud II, played an essential role in the establishment of the Imperial Schools of Medicine and Surgery. For him, "most Muslim physicians' practice is founded on the methods of old medicine, and they are not equally familiar with the methods of new medicine" (Yalçınkaya, 2015: 31).

Ottoman lands would make the successor scientists use more of the language of European medicine and consider "the old" as "ancient prejudice" (Yalçınkaya, 2015:33).

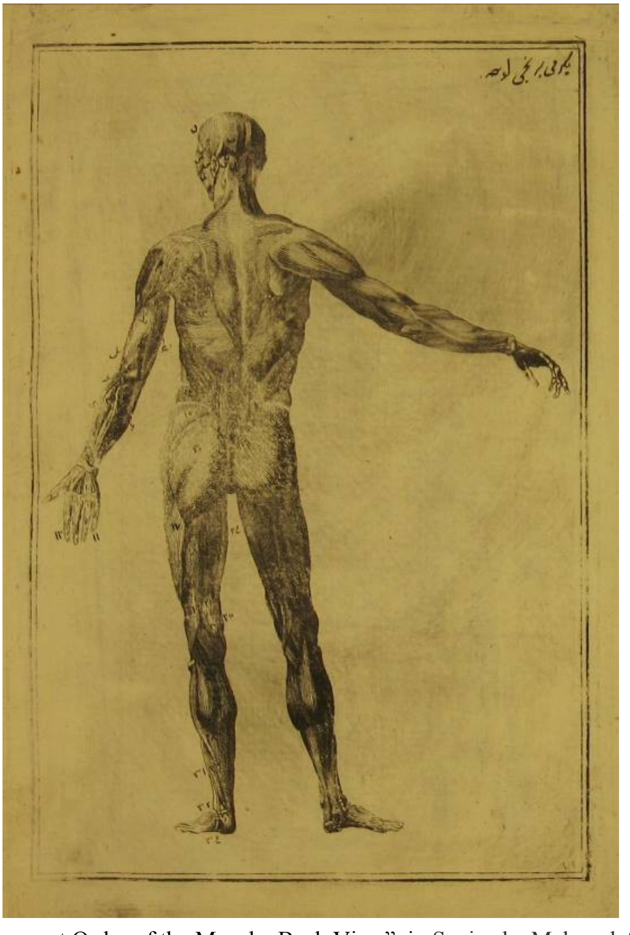

Fig. 3. "The Outermost Order of the Muscle, Back View", in Şanizade, Mehmed Ataullah Efendi, *Hamse-i Şanizade: Mir'atü'l-Ebdan fi Teşrih-i Azaü'l-İnsan*. Istanbul: Daru't-Tıbaati'l-Amire.

Conclusion

With the printing press, scientific illustrations gained the ability to "spread with no modification to other places and made available at other times" (Latour, 1990: 32). This process resulted in a new tendency in science: scientists "stop looking at nature and look exclusively and obsessively at prints and flat inscriptions" (ibid: 39). In this regard, what distinguished Diderot and Şanizade from Albinus was their selection of the working objects not from raw nature but from printed books. The illustrations they used in their books were all taken from other sources. Unlike Albinus, they were not looking at nature but at prints and flat inscriptions, or, in other words, representations. Rather than three-dimensional objects, they inspected two-dimensional images "which have been *made less confusing"* (ibid: 39). As Rheinberger argues, the comparison definitely did not take place between "nature" and its "model," but rather between the different representations (1998: 296).

This comparison among the representations of the anatomical pictures is just one difference between Albinus, Diderot and Şanizade. What is more noteworthy for the purposes of this article is the alteration of the same scientific object, "The Outermost Order of the Muscle, Back View". While traveling, the anatomical picture not only changed slightly as a picture (for example, the landscape background was entirely removed in Şanizade's book) (Figure 3) but more significantly, acquired different meanings at various stopovers. The ideology surrounding it dissolved and a new meaning emerged in each case. In brief, there was no "permanent ideology" embedded within the nature of the scientific object. The values, beliefs and meanings were loaded in their new settings. In different contexts, scientific objects "get shaped and reshaped and take on different meanings. It is these contexts that channel the emergence, the persistence, and the obsolescence of scientific objects" (Rheinberger, 2000: 293).

Albinus, Diderot and Şanizade did not define the same scientific object in the same way, nor did they live in the same social and historical context. Since there is no single inherent nature of a scientific object --just as is the case of human beings--, there is no single interpretation of it. While for Albinus, "The Outermost Order of the Muscle, Back View" exposed his ambitions to represent the "perfect" image of the body, for Diderot, it was just one of the illustrations that were needed to accomplish his grand project, the *Encyclopédie.* And for Şanizade, this picture represented the "new science" belonging to the West. "The Outermost Order of the Muscle, Back View" as a scientific object came on the historical scene within the structure of the normative, epistemological, social questions shaped by the scientists. There might be other contexts that Albinus' picture passed through in unexpected ways, such as an art piece, as a religious icon, or as an academic paper. Following the things-in-motion requires the historicization not only of humans but also of scientific objects. This historicization, as Bruno Latour argues, is necessitated "not only of the *discovery* of objects, but of those objects *themselves"* (2000: 251). Historicity, which is limited to humans, must be granted to scientific objects to illuminate their human and social context, as in the case of "The Outermost Order of the Muscle, Back View".

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Bilimin nesnelerine yüklenen tarihsellik: "Yüzeysel kasların arkadan görünümü"nün hayat hikayesinin incelenmesi

Bilimsel nesnelerin de aynen insanların olduğu gibi kendi hikâyeleri vardır. Bu nesnelerin biyografilerini incelemek, farklı bağlamlarda nasıl dönüştüklerini göstermek sadece onlar hakkında bilgi vermez, aynı zamanda onların etrafını saran insanlar ve toplumsal yaşam hakkında da bizi aydınlatır. Bu makalenin amacı da, Albinus'un anatomi atlasında yer alan "The Outermost Order of the Muscle, Back View" adlı görselin uzun yolculuğuna odaklanarak, bu görselin farklı tarihsel ve toplumsal bağlamlarda uğradığı dönüşüm sürecini göstermeye çalışmaktır. Albinus'un bu görseli çizerken amacı, "ideal bedeni" çizmektir. Bu resim tam da doğada birçok şekilde yer alan bedenlerin standardizasyonu için mükemmel bir referans noktası oluşturacaktır. Yazı, daha sonra, bu resmin Diderot ve d'Alembert'in büyük yapıtı *Encyclopédie*'de nasıl ele alındığını tartışır. Felsefeciler bu görseli başka bilim adamları tarafından çizilmiş öteki anatomi resimleriyle yan yana getirerek, Albinus'un önerdiği tek bakış açısının yerine, okuyucuya çoklu bir perspektif sunacaklardır. Son örnekte ise Şanizade'nin *Miratü'l-Ebdan* kitabı yer almaktadır. Bu örnekte, resim kendi orijinal anlamını yitirir ve Osmanlı İmparatorluğunda "yeni bilimin" ortaya çıkışının bir göstergesi olur.

Anahtar sözcükler: Albinus, Diderot ve D'Alembert, Şanizade, Bilimsel nesneler, Anatomi, Tarihsellik.

Granting historicity to scientific objects: The analysis of the life history of "the outermost order of the muscle, back view"

Scientific objects like human beings have their own stories. Thus, the examination of their lifespans and how they transform in different contexts can reveal not only information about the objects themselves, but also their social and human circumstances. This article follows the long 'travel' of an image from Albinus' anatomy book, "The Outermost Order of the Muscle, Back View", with the goal of illuminating its transformation process through different historical and social contexts. When Albinus was drawing the image, his intent was to create an "ideal body". This sort of image would be a perfect reference point for the standardization among the plentiful bodies in nature. The article then discusses how the image was appropriated by Diderot and d'Alembert in their grand work *Encyclopédie*. The philosophers juxtasposed this particular image to other anatomy pictures drawn by other scientists and offered multiple perspectives, rather than imposing a single perspective on the reader as in the case of Albinus. And lastly the image travelled to Şanizade's *Miratü'l-Ebdan,* where it lost its original scientific meaning and turned into a signifier of the emergence of "new science" in the Ottoman Empire.

Key words: Albinus, Diderot and D'Alembert, Şanizade, Scientific objects, Anatomy, Historicity.

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