

**From Manuscript as Text-container to Manuscript as Artefact: An Odyssey**

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Any travel story is a record of a journey and Odysseus' great return from Ilium to home is perhaps the best-known traveller's tale of all times. Today I wish to talk of my personal Odyssey from the study of printed texts of ancient works to the realization that texts are preserved in manuscripts and then that a manuscript is an artefact. Artefacts can yield information additional to the text, and this information together with the text, contributes to our shared historical task. This realization did not dawn upon me in one epiphany, or unfold in one evolutionary sequence, but I came to understand it in fits and starts, in leaps forward and careful backtracking, determined by many factors

An interest in the Second Temple period is a likely outcome of the study of Classics and Semitics, which were my original subjects. My interest in Armenian arose when I went to Harvard in 1961 to do a doctorate in Second Temple Judaism and among the preparatory courses I was sent to study were Armenian, Avestan, and Pahlavi. Probably due to my teacher, Avedis Sanjian who hailed originally from Jerusalem, I developed a strong bond with Armenian, extending far beyond my actual need for it as an additional research tool.

As I left Harvard in 1965, I was invited to write the commentary of 4 Ezra for the *Hermeneia* series then being planned. For this I felt that I must consult editions of this work in the various tongues in which it survived. The Armenian version needed editing and I decided to edit it. This brought me into contact with 20-odd manuscripts

containing the text of its Armenian version. So, I learned that behind the edited texts stood varied text-forms preserved in different manuscripts.

In order to understand the relationship between these text-forms, it was crucial to learn the date of undated manuscripts. That dating had to be based primarily on palaeography. Consequently, I was led to produce a major tool to help date Armenian writing.<sup>1</sup> I had moved from printed text to manuscript text and from that, to the history of the script in which the manuscript was written, and eventually to the manuscript itself.

As I followed this path, I came to realise more fully that the ancient or medieval manuscripts are not just text-containers that require analysis on paleographic grounds. They are many-dimensional physical artefacts and they should be investigated as such. This meant applying not only the philologist's accustomed arsenal of tools, but methodologies used in the natural sciences, both biological and physical, to analyse and describe physical artefacts. This research will yield new data contributing to placing the manuscript in context, whether it be a medieval Armenian codex or a Dead Sea Scroll.

In my personal pilgrimage, I reached this realisation in the last decades of the twentieth century, just when the Dead Sea Scrolls took centre-stage in the study of ancient Judaism. I had been reading fairly intensely into European codicology, that aspect of manuscript study that dealt with the "archaeology of the book," the physical construction of manuscripts, the disposition of their writing and mis-en-page, and

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<sup>1</sup> See M.E. Stone, (Editor-in-Chief) with D. Kouymjian and H. Lehmann (2002) *Album of Armenian Paleography*. Aarhus: Aarhus University Press.

further technical aspects. The DSS were scrolls but later manuscripts, both Armenian and Jewish,<sup>2</sup> were predominantly codices. Subjects like the structure of the quire, the ruling of the guide-lines for the script, the methods of sewing the quires together, of attaching the covers to the block, etc. all fall into the realm of codicology. I should add here that in what follows the word "manuscript" may mean either a roll or a codex.

When I first started teaching at the Hebrew University in 1966, I met Malachi Beit Arie, whose great project documenting medieval Hebrew manuscript codicology and scribal technique was already underway. The sort of information that can be gleaned from such systematic and comprehensive research is large and Beit-Arie's work shows its implications for dating, locating and scribal techniques. For Armenian studies, unfortunately, at the systematic level codicology remains a largely unexplored field.

Codicological research lies between the two poles of textual study on the one hand and the investigation of manuscripts as physical artefacts on the other, and it is very important. Yet, it leaves unexplored questions such as the actual composition of the inks, the writing material and its preparation, the techniques of treating leather, the gluing of the components of a roll of papyrus together, the investigation of the knots and stitches and of the thread used in sewing fascicles together to form the block of a codex or of sheets together to form a scroll of leather or parchment, and so forth. In addition, there may be chemical or other physical characteristics of a manuscript that yield information not just about its creation, but about its use, its storage, and history.

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<sup>2</sup> Barring Torah scrolls and *megillot*.

The physical degeneration of the writing or binding materials will also prove to be a significant field of investigation. Anyone who has studied ancient and medieval manuscripts, to take one example, knows about the effect of damp on the material. Damp may lead to complete degeneration, to staining or marking, or to moulds and other subsequent damage. The study of how this happened, the chemical processes of change, will contribute inevitably to the body of tools at the conservators' disposition. Conservation is a major issue not just for the Dead Sea Scrolls, where deterioration of the physical material in some instances threatens the very physical integrity and even the actual continued existence of the material. Medieval manuscripts, too, suffer deterioration, and conservation concerns determine, in addition to safe techniques to be used, data about storage conditions, exhibition parameters, use to be allowed scholars, and more. Inevitably, tension exists between the requirements of scholars who wish to read texts and view images in manuscripts, and conservators who wish to sustain the integrity of the physical manuscript. The correct balance can be reached, I believe, by basing decisions on actual knowledge of the processes by which damp and other environmental changes affect leather, parchment, papyrus, and paper.

A similar instance is the study of the chemical composition of the inks used. On this topic, there is a body of information at our disposal, from finds of ancient ink to recipes for the manufacture of inks that are preserved in ancient works. An example of a problem, not fully understood as far as I know, is cases where the ink reacts with the bearer (leather or paper) and destroys the material, leaving a sometimes legible outline of the letters. A famous example from Qumran is the Genesis Apocryphon; I

have also seen the same phenomenon in Armenian manuscripts — one that I have in mind is paper and the process has led to illegibility. Numerous other scrolls and manuscripts survive in which the chemical reaction of ink with the bearing material does not produce this deleterious effect. Why is it that degeneration happens in those specific cases and not in others?

If the ink that produces the degenerative chemical reaction is of similar composition to that on the other manuscripts, the cause must be sought elsewhere. A door to research is thus opened. If it is different, that is significant not just for understanding the phenomenon, but also for historical questions. Why is the ink different: does it originate elsewhere than the other inks? If so, where? Can we map the distribution, and consequently the location of origin of such ink? How does the occurrence of this ink relate chronologically and geographically to the information provided by archaeology and the study of ancient texts in which it is written? And where such questions will lead cannot always even be foreseen.

What I have just written about ink can be applied, *mutatis mutandis*, to other physical aspects of the manuscripts. The opportunities thus made available are enormously enhanced because today techniques exist for analysis of the inks and their bearers that are non-invasive. It does not make much sense to get this information, if the manuscript is destroyed in the process. If this data is then correlated with the sort of codicological database that Malachi Beit-Arie has produced, the results may be outstanding.

I venture to discuss one more, quite different, aspects of manuscript research to which the study of the physical character of the written material makes a quite

remarkable contribution. This is in the clarification of the meaning of terminology. I have recently completed a catalogue of Armenian manuscripts. Some of them were on animal skins, and the oldest was 12<sup>th</sup> century (from Antioch). Leather was also used in the bindings. Looking for guidance at other manuscript catalogues and descriptions, I came across a considerable unclarity as to the meaning of the terms: "leather", "hide", "parchment", "vellum", and "fine vellum". Ideally these terms should be given exact definitions. Such definitions should reflect physical aspects of the material, such as thickness, colour, mode of preparation, or other distinctive features. I decided myself, for example, not being able to ascertain the difference between parchment and vellum,<sup>3</sup> which terms overlap, to drop the term "vellum". "Fine vellum" I reserved for the distinctive, very thin, white, almost transparent parchment made from embryonic skins and used chiefly, in my own experience, in Armenian royal or very rich manuscripts.

"Parchment" seems to denote, in current usage, skin that has been stretched thin and is not tanned. Based on Pliny's account, the invention of parchment is conventionally connected with the city of Pergamum in the 2<sup>nd</sup> century BCE. "Leather" is not stretched and always tanned. Yet, many of the Dead Sea Scrolls are written on tanned parchment and also date to the 2<sup>nd</sup> century BCE. "Leather" is tanned and sometimes split. We badly need standardized and clear terminology for the different types of writing leather, not to speak of their correlation with the Hebrew/ Aramaic terminology in Rabbinic works.

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<sup>3</sup> Traditionally, vellum is calf's skin only, the name deriving from Latin *vitelum*.

The two sides of animal skins differ: the outer side is called "hair side" and the inner side is called, somewhat graphically, "flesh side". The choice of which side to write on in a scroll, or how the folded bifolia of codices, which utilize both sides are organized (hair/hair and flesh/flesh, or hair/flesh flesh/hair), as well as the number of bifolia in a quire, have been shown to be very significant for Hebrew manuscripts, sometimes betraying the likely place origin or manufacture. In the study of the two traditions with which I am personally familiar, the DSS and medieval Armenian manuscripts, the subject has barely been raised. We know, for example, that the great majority of the DSS are written on the hair side, but the great Temple scroll and Greek Minor prophets (8HevXIIgr) on the flesh side. The "why" remains a mystery.

A great disincentive to the research of this sort was the consideration that the investigation should be done with as little damage as possible to the artefact, and preferably, it should be non-invasive. This makes the well-known use of C14 dating problematic, because in order to get C14 readings, the samples have to be burned. Some C14 studies of Dead Sea scrolls fragments have been made, using small, unwritten fragments. These studies, for example, excluded definitively, the idea that the Scrolls date to some time after the destruction of the Second Temple, be it the second century or the fifth or later. Such theories had been bruited about by scholars in the 1950's and 1960's.<sup>4</sup>

Another, different benefit of the C14 research was the verification of tables of script development at Qumran prepared by Frank Moore Cross. Cross based his sequence of scripts on a typological analysis of the development of letter shapes. He

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<sup>4</sup> Fn Teicher, Zeitlin.

achieved a chronological anchoring of this sequence by comparison with contemporary, dated script samples. In almost all respects, the C14 coincided with his typology, confirming the validity of the method that he employed. This is an outcome highly significant for all paleographical analysis, not just of Hebrew and not just at Qumran.

Finally I will stress once again two points, as relevant to the Dead Sea Scrolls and as to medieval Armenian manuscripts. First, the scroll or the manuscript book contains text, yet the scroll or the book must also be studied as a physical artefact, and the results of that study will inevitably help illuminate questions like provenance (geographical and social) and date. Secondly, the study of writing materials is part of the history of technology and must also be considered in that context.

In conclusion, please consider the heavy charge laid upon the scholars and those responsible for collections: each manuscript is unique; none can we afford to destroy or neglect. Moreover, we have not reached the acme of knowledge of these physical objects and cannot confidently foresee what will damage them and what will not. The most extreme care must be employed, together with a profound recognition of our own limits, in handling and displaying all manuscript documents. We need only compare how we study these matters today to how they were investigated half a century ago, to realise how different things are likely to be in another 50 or 100 years. Caution and humility should light our way.