

Dead Sea Scrolls - The Music of the Bible

An overview on the work of Suzanne Haik-Vantura(1912 -
2000)

Hebrew Bible Cantillation

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Abstract

This paper investigates on the cantillation marks found in the Dead Sea Scrolls. Their reconstruction by the French musicologist Suzanne Haik-Vantura.

Biblical research

Biblical research is the academic investigation of the Judeo-Christian Bible along with related texts.

For Christianity, the Bible usually consists the New Testament and Old Testament, who together are often called the “Scriptures.”

Judaism recognizes as scripture only the Hebrew Bible, commonly known as as the *Tanakh*. Other texts generally examined by biblical scholars are the Jewish apocrypha , the Jewish pseudo-epigrapha, the Christian apocrypha, the numerous kinds of *ante-Nicene* early Christian literature, as well as early Jewish literature.

Biblical studies is actually a department associated with theology but an extremely technical and diversified area, it brings on the particular disciplines involving history, literary criticism, philology, and progressively more the social sciences.

Professionals connected with Biblical Research do not really possess religious beliefs commitment to the texts they examine. One other approach is the study with the Bible being a religious text, in which the assumption is that the Bible carries a divine source or inspiration. This method is really a branch associated with theology, and is also known as Biblical interpretation

Bible believers often are faced with the charge that the Bible is filled with faults. These alleged mistakes can be placed inside two main groups: obvious inside inconsistencies amongst revealed data; and also scribed errors within the actual underlying manuscripts on their own.

Biblical Exegesis

In Christianity, the actual theological interpretation of Biblical passages is known as biblical exegesis. Other divisions of Bible study purpose rather at elucidating the sources, authorship, and chronological classification of Biblical texts.

This is a department associated with philology much more than theology, and occasionally comes in to conflict with theology. “Higher criticism” and its conclusions, including the well identified documentary hypothesis which indicates that the Bible has been compiled from the writings of several different scribes, and also the work associated with the *Jesus Seminar*, that attempted to be able to cull “inauthentic” sayings of Jesus from the actual “genuine” ones included in the Gospels, are good examples of Biblical studies whose results have been especially questionable within theology.

Traditional Judaic Bible Studies

In Judaism, especially among the Orthodox, traditional Bible study entails the actual research of *Tanakh* along with medieval as well as modern rabbinic commentaries or with *Midrashim*, which traditionally have adopted the actual Biblical interpretation or exegesis approach. Jews typically study in the household or in institutions such as the yeshiva.

Musical Archeology

When working with the particular Dead Sea Scrolls we are coping with a period while writing itself was new.

Cuneiform tablets remain from early Old Testament-Ancient Near East times, hieroglyphs, and down the line Hebrew scripting. Papyrus was basically new.

"New Testament" Times

In New Testament times, the particular Greek and also Roman alphabets have been in use, but higher mathematics still were unavailable until the discovery of Arabic numerals.

The actual crudest form of musical notation needed to wait around to develop another thousand years after New Testament times, resulting in 1600 years, to refine it to contemporary understanding.

So how can we discover songs of these times? Merely by referrals to that ancient materials and also to the effective oralverbal custom by itself, and also organology, and archaeology, as well as the mixed skills of specialist paelaeography and ethnomusicology.

We have been especially indebted on the huge scholarship of Jewish musicologist Abraham Idelsohn, working in the first years of the 20th century to create his monumental Thesaurus of Hebrew Oriental Songs.

Idelsohn's researches in Jewish neighborhoods throughout the world, and especially the Babylonian Jews, offered him recurring motives as well as progressions that have been not really apparent in almost any other national nor ethnic music, suggesting a common origin with regard to these melodies within Israel/Palestine of the first century CE before the destruction of the Second Temple.

These types of musical pieces fell in to three tonal centres: Dorian, Phrygian and Lydian modes of the old Greeks (by itself suggesting a standard ear in the region).

Church music for millenia was based about these types of modes, and grew to become called the Ecclesiastical Modes - virtually all named after numerous Greek tribes. Dorian (D-d), Phrygian (E-e), Lydian (F-f), Mixolydian (G-g), Aeolian (A-a), Ionian (C-c) - (note B-b is actually missing- a



Figure 1: Silver lyre

dropped Locrian mode).

They are distant from your modern day Major/minor modes. But because these are oriental melodies, there are also microtones, quartertones, that is usually, in between each note of those modes. The octave consists of twenty-four quartertones, not necessarily twelve semitones as we all are used to.

Incantation versus Chanting

It is likely that this vocal music coming has been neither chanted nor sung to the modern ears accustomed to developed voices, but declamed or perhaps incanted in a probably nasal tone, with a tight throat, not dissimilar to Polynesian or Maori singing production.

This is the Latin expression “*carmen dicere*” to communicate the melody that continues like a Middle eastern and also Jewish custom. It enables the singer to breathe the lyrics of the prophets, and also have the meaning at a profound level, and also connect awareness with the prophets.

Some sort of gilded lyre discovered at Ur-c2650BCE, testifies to a sophisticated music concept and procedure right now there, which includes a wealth of contemporary Akkadian cuneiform texts about tuning settings, string names and also hymns.

These individuals were mindful of their pantheon of gods inhabiting the particular world of music. So a intonation system for a stringed musical instrument, possibly this lyre, uses “*Gotterzahlen*” - *God-Numbers*, possibly throughout an attempt to resonate with the god.



In some sort of musico-mythographical context, these god-numbers or ratios, tend to be expressed within systems, tantalisingly for us, sometimes frequencies as well as units regarding string length, or even both equally, symbolizing the various gods *Anu, Enlil, Sin, Samas, Bel, Mardu* (15 - 30 - 40 - 50 - 60) (in this are evident octaves and Pythagorean ratios that grew to become the foundation of Western tuning methods).

This can imply they had music in two parts, the particular lowest string (15) giving the bass line or drone. It could even imply a method of harmony based on chords of some type - such did not begin to evolve within Western Music until eventually medieval periods.

Dead Sea Scrolls

The Dead Sea Scrolls were initially discovered from Bedouin herders after which by archaeologists close to Khirbet Qumran, on the northwestern coast line of the Dead Sea in Israel. A large number of pieces had been discovered and put together into more than 900 distinct documents including biblical books, hymns, prayers, and other important writings. Dead Sea scrolls happen to be called the biggest manuscript breakthrough discovery of recent years.

The geography of the discovery is a dry region 20km Eastern of Jerusalem and 450m below sea level. Dead Sea Scrolls are comprised of the remains of approximately 825 to 870 individual scrolls, represented by tens of thousands of fragments.

The manuscripts are most commonly manufactured from animal skins, but additionally papyrus and one made of copper. They are generally made





with a carbon-based ink, from right to left, using no punctuation marks except for an occasional paragraph formatting.

The discovery

Muhammed edh-Dhib along with his nephew discovered the caves, and soon afterwards the scrolls. John C. Trever reconstructed the story of the scrolls by many interviews with the Bedouin. edh-Dhib's cousin noticed the caves, however edh-Dhib on his own has been the first to really fall into one. He retrieved a small number of scrolls, which Trever recognizes as being the Isaiah Scroll, Habakkuk Commentary, as well as the Community Rule (initially known as "Manual of Discipline"), and took them back into the camping to show to his family. None from the scrolls had been damaged on this course of action, in spite of common rumor.

The Dead Sea Scrolls appear to be the particular library of a Jewish sect, deemed more than likely the Essenes. Close to the caves are the historic ruins of Qumran, there is one village excavated during the early 1950's which exhibits connections both the Essenes and also the scrolls.

Qumran is a good archaeological site in the West Bank. It is situated upon one dry plateau roughly a mile away from the coast from the north-western shore of the Dead Sea, near the Israeli settlement deal and kibbutz of Kalia.

The Essenes had been strictly observant Jewish scribes, who appear Messianic as well as apocalyptic in believing. The library appears to have ended up concealed away within caverns around the outbreak of the initial Jewish Revolt (66-70 A.D.) when the Roman military progressed while combating the Jews.

Whatever may be the beginnings of these scrolls, their importance continues to be irrefutable. People see it through numerous points of views and try to draw meanings from it.



Figure 2: The Qumran cavern

The importance of the Scrolls

With regard to Hebrew literature, it is an important piece pertaining to textual research. Similarly when it comes to the experts in paleography it is really an opportunity for studying the particular versions within Hebrew writing styles. For students of Judaism, the scrolls shed light on the actual tendencies on existence while in the Jewish revolt and to the advocates of Christianity certainly, there tend to be evidences within the messianic prophecy.

The the greater part of the scrolls are housed in Israel under the attention as well as guardianship of the Israel Antiquities Authority (eight manuscripts at the *Shrine of the Book* museum together with all others in the *IAA State Collections*). Additionally, there are a few scrolls inside Jordan as well as in Europe.

Exactly why have been the scrolls concealed in the caves? Exactly who put these there? Found in 1952, Cave four generated the largest find. About 15,000 fragments coming from over 500 manuscripts were found. In caves overlooking the Dead Sea, where the Essenes are believed to have dwelled, scrolls were stored which were to get discovered within the 20th century. Thirty-three of the scrolls appeared to be in Hebrew, which usually, in the times of the Essenes, has been regarded as the holy language of Moses. First and foremost, there was the challenging task involving deciphering as well as translating, through photos, the manuscripts from Qumran Cavern Four that had previously remained unpublished. Another aspect features investigate the overall problem of identification of the authors of the scrolls



Figure 3: Qumran living quarters of the Essenites

and, progressively, to look at the essentials of the Khirbet Qumran site and the theory the manuscripts found at the surrounding caverns were composed by the sect ostensibly living there.

Qumran-Essene Theory and the departures from it

The Qumran-Essene theory continues to be the particular dominant theory since its preliminary proposal by Roland de Vaux and J.T. Milik. Recently, nonetheless, several other scholars already have suggested substitute origins for the scrolls. The main point of departure from the Qumran-Essene theory is actually doubt to link the Dead Sea Scrolls especially with the Essenes. Most advocates of the Qumran-Sectarian concept understand a group of Jews residing in or near Qumran being responsible for the Dead Sea Scrolls, but do not necessarily deduce that the sectarians usually are Essenes.

Qumran-Sadducean Theory: A specific alternative on the Qumran-Sectarian theory which has acquired a lot current recognition, is actually the effort of Lawrence H. Schiffman who proposes that this community had been directed by a group of Zadokite priests (Sadducees). Probably the most essential document supporting this view would be the “Miqsat Ma’ase

Ha-Torah” (4QMMT), which points out purity regulations (such as the shift of impurities) just like those attributed in rabbinic documents to the Sadducees. Scroll *4QMMT* additionally reproduces a festivity calendar that follows Sadducee principles with regard to the actual dating of certain festival days.

Christian Origin Theory: Although one can find undoubtedly some prevalent features shared in between different Jewish sectarian groups, the majority of historians deny there is any kind of link among the Christians and the writers of the Dead Sea Scrolls. There is certainly little to claim that the Christians at the moment had been as secluded or even as interested in elaborate traditions of purity and chastity as the Jews. O’Callaghan-Martinez has asserted that one fragment (7Q5) displays a part of textual content from the New Testament Gospel of Mark 6:52-53.

In the past few years, Robert Eisenman has advanced the theory in which a few scrolls essentially illustrate the first Christian community. Eisenman also attempted to relate the career of James the Just and the Apostle Paul - Saul of Tarsus to some of those records. This continues to be speculative and is also invalidated by a massive majority of academicians studying Judaism in the early Roman period.

Jerusalem Origin Hypothesis: A few scholars have asserted that the scrolls had been the work of Jews residing in Jerusalem, who concealed the scrolls in the caves near Qumran whilst escaping from the Romans during the devastation of Jerusalem in 70 CE. Karl Heinrich Rengstorf first proposed that the Dead Sea Scrolls came from at the library in the Jewish Temple in Jerusalem.

Later, Norman Golb advised the fact that scrolls were the goods of multiple libraries in Jerusalem, and not necessarily the Jerusalem Temple library. Proponents of the Jerusalem Origin theory indicate the variety of thought and handwriting among the scrolls as proof in opposition to a Qumran origin of the scrolls.

Several archaeologists have also accepted the origin of the scrolls other than Qumran, such as Yizhar Hirschfeld and most recently Yizhak Magen and Yuval Peleg, who all understand the remains of Qumran to be the ones from a Hasmonean fort which was reused in the course of later periods.

The texts

The texts are generally of excellent religious as well as historical value, as they include the oldest identified remaining copies of Biblical and extra-biblical records and maintain evidence of excellent diversity in late Second Temple Judaism. They have got prompted rigorous scholarly discussion as

Event	Date	de Vaux	Magness	Humbert	Hirschfeld	Magen & Peleg	Cargill
	700 BCE						
	630 BCE						
Destruction of 1st Temple	586 BCE	Iron Age	Iron Age	Niveau 1	Stratum I	Phase A "Iron Age"	Phase 1 "Iron Age"
	140 BCE						
	130 BCE						
	120 BCE	Period Ia "Sectarian"			Stratum II "Fortress"		Phase 2 "Fortress"
	110 BCE						occupational gap
	100 BCE						
	90 BCE	Period Ib "Sectarian Occupation"		Niveau 2 "Hasmonean Villa"		Phase B "Fortress"	Phase 3 "Sectarian Reoccupation and Expansion"
	80 BCE		Pre-31 Ib "Sectarian Occupation"			Phase C "Fortress"	
Advent of Pompey / Rome	63 BCE					Phase D "Pottery Facility"	
	50 BCE						
	37 BCE						
Earthquake	31 BCE				Stratum III		
	20 BCE	occupational gap	Post-31 Ib "Sectarian"	Niveau 3 "Essene Worship Center"	"Fortified Manor House"	Phase E "Pottery Facility"	Phase 4 "Sectarian Occupation"
	10 BCE						
	4 BCE	Period II "Sectarian Occupation"	Period II "Sectarian Occupation"				
	10 CE						
	20 CE						
	30 CE						
	40 CE						
	50 CE						
	60 CE						
Jewish Revolt	68 CE						
	72 CE	Period III	Period III	Niveau 4 "Post Revolt"	Stratum IV "Roman Occupation"	Phase F "Post Destruction"	Phase 5 "Post Destruction"
Destruction of Masada	90 CE		"Post Destruction"				
	100 CE						
	110 CE						
	120 CE						
	132 CE						
Bar-Kokhba Revolt	135 CE	Second Revolt					

Figure 4: Qumran chronology

to who their authors may have been, and they've given us a rare glimpse into what existence had been like at about the time of Christ. Other discovers followed: in 1952 Cavern three was found, including the Copper Scroll. The most crucial Cavern for our purposes was Cave 4, discovered in 1954. They are written in Hebrew, Aramaic and Greek. Most of these manuscripts generally date in between 150BCE and 70CE.

Grouping the Scrolls

The Dead Sea Scrolls are traditionally divided into three groupings: "Biblical" manuscripts (copies of texts out of the Hebrew Bible), which comprise approximately 40 scrolls; "Apocryphal" or "Pseudo-epigraphical" manuscripts (identified records coming from the Second Temple Period such as *Enoch*, *Jubilees*, *Tobit*, *Sirach*, non-canonical psalms, etc., that were not eventually canonized in the Hebrew Bible), which comprise around 30 (formerly unknown written documents which speak to the rules and values associated with a specific group or groups within higher Judaism) such as the "Community Rule", "War Scroll", "Pesher on Habakkuk" (pesher: "Commentary"), and also the "Rule of the Blessing", which in turn comprise roughly 30



Figure 5: Cavern n.4

Excavations

Considering the fact that the finding through 1947 to 1956 of nearly nine hundred scrolls in various conditions, largely composed on parchment, along with others on papyrus, extensive excavations of the settlement are already undertaken. Cisterns, Jewish ritual baths, and cemeteries are already discovered, along with a dining or meeting place and vestiges coming from an higher story alleged by some to have been a scriptorium as well as pottery kilns along with a tower.

The Story of the Discovery

The Bedouins

The Bedouin initially took the scrolls to a dealer named Ibrahim 'Ijha in Bethlehem. 'Ijha returned all of them, stating they were worthless, right after getting cautioned that they could have been ripped off from a synagogue.

Undaunted, the Bedouin went along to a neighborhood marketplace, where a Syrian Christian agreed to purchase them. A sheikh joined their discussion and suggested they take the scrolls to Khalil Eskander Shahin, "Kando," a cobbler and part-time antiques seller. The Bedouin and also the traders returned to the site, leaving behind a single scroll with Kando and offering three others to a dealer for (\$29 in 2003 US dollars).

Plans with the Bedouin left the scrolls in the hands of a third party until any profitable sale of these might be negotiated. That third party,

George Isha'ya, was a fellow member of the Syrian Orthodox Church, which soon approached St. Mark's Monastery in the hope of getting an appraisal with the nature of the texts. Information about the find then arrived at Metropolitan Athanasius Yeshue Samuel, better known as Mar Samuel.

Mar Samuel

After analyzing the scrolls and suspecting their particular antiquity, Mar Samuel expressed a desire for purchasing them. Four scrolls found their way directly into his hands: the now well-known Isaiah Scroll (1QIsa), the Community Rule, the Habakkuk Peshier (a comments on the book of Habakkuk), and also the Genesis Apocryphon.

More scrolls soon come up in the antiquities marketplace, and Professor Eleazer Sukenik and Professor Benjamin Mazar, Israeli archaeologists at Hebrew University, soon discovered themselves owning three, The War Scroll, Thanksgiving Hymns, and another, much more fragmented, Isaiah scroll. Towards the end of 1947, Sukenik and Mazar received word from the scrolls in Mar Samuel's possession and attempted to purchase all of them. No deal was attained, and instead the scrolls captured the interest of Dr. John C. Trever, of the American Schools of Oriental Research (ASOR), who compared the script in the scrolls to that of The Nash Papyrus, the earliest biblical manuscript then known, and discovered similarities amongst them.

The photographs allows for the reading

Dr. Trever, a keen amateur professional photographer, met with Mar Samuel on February 21, 1948, when he took pictures of the scrolls. The high quality of his photos frequently exceeded the visibility of the scrolls themselves over the years, as the ink of the texts quickly deteriorated right after they had been taken out from their own linen wrappings.

The scrolls were examined making use of a cyclotron at the University of California, Davis in which it was found that the black ink used was iron-gall ink. The red ink on the scrolls was cinnabar (HgS, mercury sulfide). In March, the 1948 Arab-Israeli War prompted the removal of the scrolls to Beirut, Lebanon with regard to safekeeping.

Early in September, 1948, Mar brought Professor Ovid R. Sellers, the new Director of ASOR, some extra scroll pieces which he acquired. By the end of 1948, nearly a couple of years after their uncovering, scholars had yet to locate the actual cavern exactly where the fragments had been identified. With unrest in the country at this time, no large-scale search could be carried out. Retailers attempted to get the Syrians in order to help him locate the cave, but they required much more money than he could provide. Finally, Cavern 1 has been found, upon January 28, 1949, by a United Nations observer. The Dead Sea Scrolls went up for sale eventually,

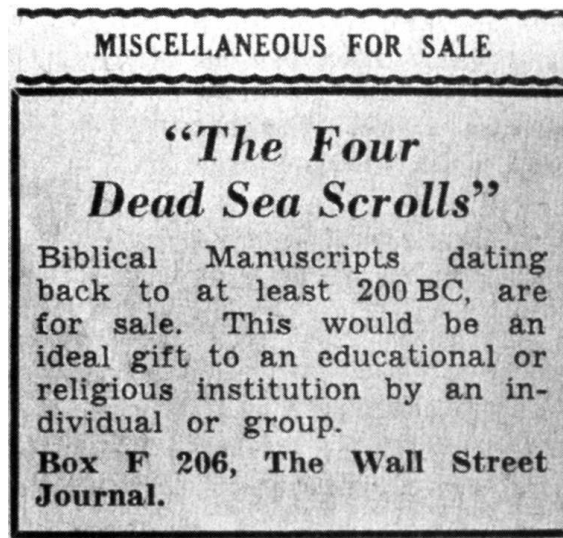


Figure 6: for sale

in an advertisement in the June 1, 1954 Wall Street Journal.

Getting into the right hands

On July 1, the scrolls, after sensitive negotiations as well as followed by three individuals including the Metropolitan, arrived at the Waldorf-Astoria Hotel in New York. They had been purchased by Prof. Mazar and the son of Prof. Sukenik, Yigael Yadin, for US\$250,000 and delivered to Jerusalem, where they were on exhibit at the Rockefeller Museum.

After the Six-Day War, the scrolls were moved to the *Shrine of the Book*. The Shrine of the Book, a wing of the Israel Museum close to Givat Ram in Jerusalem, houses the Dead Sea Scrolls.

Historical importance of the Scrolls

Before the discovery of the Dead Sea Scrolls, the most ancient Hebrew manuscripts associated with the Bible were Masoretic texts dating to tenth century CE such as the Aleppo Codex. The biblical manuscripts discovered among the Dead Sea Scrolls drive that date back a millennium to the 2nd century BCE. Before this particular breakthrough, the earliest extant manuscripts of the Old Testament have been in Greek in manuscripts such as Codex Vaticanus Graecus 1209 and Codex Sinaiticus.

According to The Oxford Companion to Archaeology: The biblical manuscripts coming from Qumran, that include at least pieces from every single book of the Old Testament, other than perhaps for the Book of Esther, provide a far older cross part of scriptural traditions than which obtainable to scholars

just before.

While some of the Qumran biblical manuscripts are nearly similar to the Masoretic, or traditional, Hebrew text of the Old Testament, some manuscripts of the books of Exodus and Samuel found in Cave Four exhibit dramatic variations in both vocabulary as well as content material. In their own amazing variety of textual variants, the Qumran biblical discoveries have motivated scholars to reevaluate the once-accepted hypotheses of the advancement of the modern biblical text from just three manuscript families: of the Masoretic text, of the Hebrew original of the Septuagint, and of the Samaritan Pentateuch. It is now getting progressively clear that the Old Testament scripture had been extremely smooth till its canonization around A.D. 100.[21]

About 35 Masoretic tradition (MT), 5 to the Samaritan, with the rest unaligned. The non-aligned fall into a couple of groups, those irregular in agreeing with other known types, and those that diverge considerably from just about all other known readings. The DSS thus form a substantial witness to the mutability associated with biblical texts at this time period. The sectarian texts among the Dead Sea Scrolls, most which were formerly unidentified, offer fresh light on a single type of Judaism practiced during the Second Temple period of time.

Books of the Bible Ranked According to Number of Manuscripts found:

Psalms 39
Deuteronomy 33
Enoch 25
Genesis 24
Isaiah 22
Jubilees 21
Exodus 18
Leviticus 17
Numbers 11
Minor Prophets 10
Daniel 8
Job 6
Jeremiah 6
Ezekiel 6
Samuel 4

Facts About the Dead Sea Scrolls

Only Caves 1 and 11 have produced relatively intact manuscripts. Discovered in 1952, Cave 4 produced the largest find. About 15,000 fragments from more than 500 manuscripts were found. 3. In all, scholars have identified the remains of about 825 to 870 separate scrolls.



Figure 7: The Torah scroll

The Scrolls can be divided into two categories-biblical and non-biblical. Fragments of every book of the Hebrew canon (Old Testament) have been discovered except for the book of Esther. 5. There are now identified among the scrolls, 19 copies of the Book of Isaiah, 25 copies of Deuteronomy and 30 copies of the Psalms .

Prophecies by Ezekiel, Jeremiah and Daniel not found in the Bible are written in the Scrolls. The Isaiah Scroll, found relatively intact, is 1000 years older than any previously known copy of Isaiah. In fact, the scrolls are the oldest group of Old Testament manuscripts ever found.

In the Scrolls are found never before seen psalms attributed to King David and Joshua. Torah

There are nonbiblical writings along the order of commentaries on the OT, paraphrases that expand on the Law, rule books of the community, war conduct, thanksgiving psalms, hymnic compositions, benedictions, liturgical texts, and sapiential (wisdom) writings.

The Scrolls are for the most part, written in Hebrew, but there are many written in Aramaic. Aramaic was the common language of the Jews of Palestine for the last two centuries B.C. and of the first two centuries A.D.

The discovery of the Scrolls has greatly enhanced our knowledge of these two languages. In addition, there are a few texts written in Greek. 11. The Scrolls appear to be the library of a Jewish sect. The library was hidden away in caves around the outbreak of the First Jewish Revolt (A.D. 66-70) as the Roman army advanced against the rebel Jews.

Near the caves are the ancient ruins of Qumran. They were excavated in the early 1950's and appear to be connected with the scrolls.

The Dead Sea Scrolls were most likely written by the Essenes during the period from about 200 B.C. to 68 C.E./A.D. The Essenes are mentioned by Josephus and in a few other sources, but not in the New testament. The Essenes were a strict Torah observant, Messianic, apocalyptic, baptist, wilderness, new covenant Jewish sect. They were led by a priest they called the "Teacher of Righteousness," who was opposed and possibly killed by the establishment priesthood in Jerusalem.

The enemies of the Qumran community were called the "Sons of Darkness"; they called themselves the "Sons of Light," "the poor," and members of "the Way." They thought of themselves as "the holy ones," who lived in "the house of holiness," because "the Holy Spirit" dwelt with them.

The last words of Joseph, Judah, Levi, Naphtali, and Amram (the father of Moses) are written down in the Scrolls.

One of the most curious scrolls is the Copper Scroll. Discovered in Cave 3, this scroll records a list of 64 underground hiding places throughout the land of Israel. The deposits are to contain certain amounts of gold, silver, aromatics, and manuscripts. These are believed to be treasures from the Temple at Jerusalem, that were hidden away for safekeeping.

The Temple Scroll, found in Cave 11, is the longest scroll. Its present total length is 26.7 feet (8.148 meters). The overall length of the scroll must have been over 28 feet (8.75m).

The scrolls contain previously unknown stories about biblical figures such as Enoch, Abraham, and Noah. The story of Abraham includes an explanation why God asked Abraham to sacrifice his only son Isaac.

The scrolls are most commonly made of animal skins, but also papyrus and one of copper. They are written with a carbon-based ink, from right to left, using no punctuation except for an occasional paragraph indentation. In fact, in some cases, there are not even spaces between the words.

The Scrolls have revolutionized textual criticism of the Old Testament. Interestingly, now with manuscripts predating the medieval period, we find these texts in substantial agreement with the Masoretic text as well as widely variant forms. Section of the Psalms Scroll.

Some of the Dead Sea Scrolls actually appeared for sale on June 1, 1954 in the Wall Street Journal. The advertisement read - "The Four Dead Sea Scrolls: Biblical manuscripts dating back to at least 200 BC are for sale. This would be an ideal gift to an educational or religious institution by an individual or group. Box F206."

Although the Qumran community existed during the time of the ministry of Jesus, none of the Scrolls refer to Him, nor do they mention any of His follower's described in the New Testament.

The major intact texts, from Caves 1 and 11, were published by the late fifties and are now housed in the Shrine of the Book museum in Jerusalem.

Since the late fifties, about 40 from Cave 4, remained unpublished and were inaccessible. It wasn't until 1991, 44 years after the discovery of the first Scroll, after the pressure for publication mounted, that general access was made available to photographs of the Scrolls. In November of 1991 the photos were published by the Biblical Archaeological Society in a nonofficial edition; a computer reconstruction, based on a concordance, was announced; the Huntington Library pledged to open their microfilm files of all the scroll photographs.

The Dead Sea Scrolls enhance our knowledge of both Judaism and Christianity. They represent a non-rabbinic form of Judaism and provide a wealth of comparative material for New Testament scholars, including many important parallels to the Jesus movement. They show Christianity to be rooted in Judaism and have been called the evolutionary link between the two.

Biblical content comprises of fragments that detail most texts of the Old Testament. Non-biblical content is of a generic nature comprising of biblical commentaries, laws of the time, wisdom of life, to name a few is roughly 30 Scrolls.

Fragments of writings of the Apocrypha were identified, including two of Jubilees and one of the Testament of Levi, along with pieces of previously unknown pseudepigraphical writings. There was a considerable variety of liturgical poetry lacking all evidence of sectarian orientation.

On Jewish Liturgical Music

Jewish liturgical music is usually recognized by a set of musical modes. There are a number methods in order to define a musical mode - many scholars think about a mode being a assortment of pitches or perhaps a scale, whilst others determine a mode as a collection of musical motives or phrases. These modes make up musical nusach , which usually acts to both identify various kinds of prayer, as well as to link these prayers towards the time of year, or even time of day where they are set.

There are actually three principal modes, as well as a number of mixed or compound modes. These primary modes are known as Ahavah Rabbah, Magein Avot and Adonai Malach. Traditionally, the Cantor (Hazzan) improvised sung prayers inside the chosen mode, whilst following a general framework of exactly how every prayer should sound. As time passes many of those chants happen to be written and standardized, however the practice associated with improvisation nevertheless exists to this day.

Various Jewish customs developed their own modal systems, such as the maqamat in the Middle Eastern Jewish communities. The modes discussed here are usually specific for the practices of Eastern European (Ashkenazi) Jewish Communities. Following the devastation of the Temple, instrumental music, even for religious purposes, was prohibited. Synagogue music served

the text, although prayer modes carried on to grow through the seventh century.

As early as the second century, it was typical in synagogues to locate *tomechim* (musical assistants), "men of sweet voice and musical ability", who sang the prayers. The Islamic conquest introduced metrical poetry, or the *piyyut*. The *piyyut* stimulated the development of intricate rhythmic and modal music. This kind of new music required new artistic demands, which in turn led to the emergence of the *hazzan*, a music professional who directed services.

The intonation of Jewish liturgical music is dependent upon "the structure in the phrase and its particular logical associations. Neither its music nor its notation [is] independent."

Musicologists point out that the opening and closing tones of Jewish cantillation and Gregorian chant adhere to basic fundamental rising and falling designs. Syllabic (one word one note) patterns are employed through the entire service, but are punctuated with ornamented melismas (what jazz musicians would call *improvs*) at most solemn occasions within the service. Women just weren't allowed to take part and instruments had been prohibited (before the rise of Western polyphony in the early middle ages).

By the 10th century, Eastern Jews used Arabic musical meters and melodies for their particular synagogue music. By the 11th century, Ashkenazi synagogues had been greatly under the influence of German sacred and secular music. A folk melody might become sanctified whenever mixed with a poem or hymn made for the synagogue service. The custom of adding new songs into the synagogue are at minimum a thousand years old. So is the convention of complaining that the *hazzan* was leaving aged sanctified melodies, handed down from the fathers.

The notation of Jewish cantillation and the "neumes" or signs of early Gregorian chant before the adoption of staff notation are similar to the Jewish ones because they emerged as visual "graphs" from hand gestures that give people who live within the oral musical tradition an understanding of diverse musical phrases, instead of individual notes. This technique continues to be in use in Jewish synagogues around the globe.

Maqams

The name *maqam* appeared for the first time in the treatises written in the 14th century by Al-Sheikh Al-Safadi and Abdulqadir Al-Maraghi, and it has since that time already been utilized as a technical term in Arabic music.

The *maqam* is a modal structure that characterizes the art of music of countries in North Africa, the Near East and Central Asia. In this region we can differentiate three main musical cultures which almost all belong

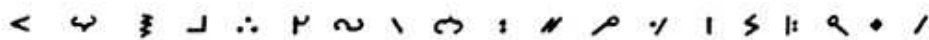


Figure 8: Cantillation signs, 1

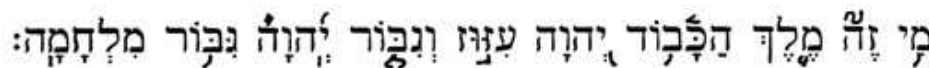


Figure 9: Cantillation signs, 2

to the maqam modal family, namely the Persian, the Arabic, and also the Turkish, along with the tightly related Greek .

Most of the passages within the prayer book, like the *Amidah* and the Psalms, are usually chanted in a recitative rather than either read in normal speech or sung to a rhythmical tune. The recitatives follow a system of musical modes , somewhat just like the maqamat of Arabic music. For instance, Ashkenazi cantorial practice differentiates a number of steiger (scales) called after the prayers by which they are employed, like as the Adonoi moloch steiger and also the Ahavoh rabboh steiger . Mizrahi communities including the Syrian Jews use the full maqam system.

Cantillation Signs

Cantillation is the particular ritual chanting of readings from the Hebrew Bible in synagogue services.

The chants are composed and notated in accordance with the specific indications or marks printed within the Masoretic text of the Hebrew Bible (or Tanakh) to fit the letters as well as vowel points.

These types of marks are known in English as accents and in Hebrew as ta'amei ha-mikra or just te'amim . (A few of these signs had been also sometimes utilized in middle ages manuscripts of the Mishnah.) The actual musical motifs linked to the signs are usually recognized in Hebrew as niggun and in Yiddish as trope is usually used in English with the same meaning.

A primary purpose of the cantillation signs is to advice the chanting of the holy texts during community worship. Fairly approximately speaking, each and every word of text has a cantillation mark at its main accent and associated with that mark is a musical phrase that tells how you can sing that word. The truth is more complicated, with a few words having two or even simply no marks and the musical meaning of some marks dependent upon framework. There are various sets of musical phrases associated with various parts of the Bible. The music differs with various Jewish traditions and personal cantorial styles. There's a couple of methods of cantillation marks within the Tanakh. One is used in the twenty-one prose books, whilst the other shows up in the three poetical books of Psalms , Proverbs and Job

מִי זֶה מֶלֶךְ הַכֹּהֵן יְהוָה עֲנֵן וּנְבוֹר יְהוָה גְּבוֹר מִלְחָמָה:

Figure 10: Cantillation signs, 3

. Except where otherwise stated, this method explains the “prose” system.

A few old manuscripts of the Mishnah consist of cantillation marks similar to those in the Bible. There’s really no surviving system for the musical rendition of those, there is often a traditional intonation utilized in study regarding Mishnah or Talmud, relatively like an Arabic maqam , however this is not reduced to some exact system such as that for the Biblical books. Recordings have been created for Israeli national archives, and Frank Alvarez-Pereyre has got published a book-length research of the Syrian tradition on the basis of these types of recordings.

The Purpose of Cantillation Signs

The cantillation signs provide three functions:

Syntax: They divide biblical passages into smaller units of meaning, a function which additionally gives them a restricted yet occasionally essential part as being a resource for exegesis. This particular function is actually achieved through the use of various conjunctive signs (which indicate which words ought to be linked in one phrase) and especially a hierarchy of separating signs of various strength which separate every verse straight into smaller phrases. The function of the disjunctive cantillation indicators may be approximately compared to contemporary punctuation signs such as periods, commas, semicolons.

Phonetics: Most of the cantillation signs reveal the particular syllable in which the stress (accent) falls within the diction of a word.

Music: The cantillation signs have musical importance: reading the Hebrew Bible with cantillation becomes a musical chant, where the music by itself functions as a tool to emphasise the correct accentuation and syntax (as mentioned previously).

The syntactical function

In general, each word in the Tanach has one cantillation sign. This may possibly be either a disjunctive, displaying a division in between that and the following word, or a conjunctive, connecting to the two words (like a slur in music). Therefore, disjunctives separate a passage into terms, and inside each phrase all of the words other than the last carry conjunctives. The

disjunctives are traditionally divided in to four ranges, with lower degree disjunctives tagging much less important breaks.

1. The first level, known as “Emperors”, includes sof pasuq / siluq, marking the actual conclusion of the verse, and atnach / etnachta, marking the middle.

2. The second level is known as “Kings”. The usual second level disjunctive is zaqef qaton (when on its own, this particular will become zaqef gadol). This is changed by tifcha whenever in the immediate neighbourhood of sof pasuq or atnach. A stronger second level disjunctive, utilized in extremely long verses, is segol: whenever it takes place on its own, this may be replaced by shalshelet.

3. The third level is identified as “Dukes”. The typical third level disjunctive is revia. With regard to musical reasons, this kind of is actually changed by zarqa whenever within the vicinity of segol, by pashta or yetiv whenever in the vicinity of zakef, and by tevir when in the vicinity of tifcha.

4. The fourth level is acknowledged as “Counts”. These tend to be found mostly in longer passages, and have a tendency to group close to the beginning of a half-verse: for this cause their own musical realisation is actually more elaborate compared to that of higher degree disjunctives. They are pazer, gersh, gershayim, telishah gedolah, munach legarmeh and qarne farah.

The general conjunctive is munach. Depending upon which disjunctive comes after, this specific may possibly be exchanged by mercha, mahpach, darga, qadma, telisha qetannah or yerach ben yomo. One other mark is mercha kefulah, double mercha. There is some argument regarding whether or not this particular is an additional conjunctive or an occasional replacement for tevir.

Disjunctives have a function somewhat comparable to punctuation in Western languages. Sof pasuq could be thought of as a full stop, atnach as a semi-colon, second level disjunctives as commas and third level disjunctives as commas or unmarked. Where a couple of words are syntactically bound with each other (for example, pene ha-mayim, “the face of the waters”), the initial inevitably carries a conjunctive.

Importance in the understanding

The cantillation signs tend to be often an essential help in the interpretation of a passage. For example, the words qol qore bamidbar panu derekh YHWH (Isaiah 40-3) is translated in the Authorised Version as “The voice of him that crieth in the wilderness, Prepare ye the way of the Lord”. As the actual term qore takes the high-level disjunctive zaqef qaton this specific meaning is discouraged by the cantillation marks. Accordingly the New Revised Standard Version translates “A voice cries out: ‘In the wilderness prepare the way of the Lord’,” whilst the New Jewish Publication Society

Version has “A voice rings out: ‘Clear in the desert a road for the LORD’.”

The phonetic function

The majority of cantillation signs are created upon the consonant of the stressed syllable of a word. This also exhibits exactly where the most important note associated with the musical motif should go. A few signs always go on the initial or final consonant of a word. This may have been for musical factors, or it may be to distinguish them from additional accents of similar design. For example pashta, which should go on the last consonant, or else looks like qadma, which should go on the stressed syllable.

A number of signs are usually written (and sung) differently when the word is not stressed upon its final syllable. Pashta on a word of this particular sort is doubled, one going on the stressed syllable and the other upon the last consonant. Geresh is doubled except if it takes place on a non-finally-stressed word or comes after qadma (to form the qadma ve-azla phrase).

The musical function

Cantillation signs guide the reader in applying a chant to Biblical readings. This chant is formally regarded as a ritualized form of speech intonation instead than as a musical exercise such as the performing of metrical hymns: with regard to this reason Jews always speak of saying or reading through a verse instead than of singing it. (In Yiddish the word is *leyn* “read”, derived from Latin *legere*, giving rise to the Jewish English verb “to leyn”.)

Types of Cantillation Marks

The musical worth of the cantillation marks acts the identical function for Jews worldwide, however the specific songs differ among various communities. Three systems of Hebrew punctuation (which includes vowels and cantillation symbols) have been employed: the Babylonian, the Palestinian and the Tiberian, only the very last of which is actually used these days.

Babylonian system

Babylonian Biblical manuscripts through the Geonic period include not any cantillation marks in the current sense, however little Hebrew letters are employed to indicate important divisions within a verse. Up to eight diverse characters are generally found, depending upon the importance of the break and where it takes place within the verse: these match approximately to the

disjunctives of the Tiberian system. For example, in some manuscripts the letter tav, for tevir (break), does work for both Tiberian tevir and zaqef.

In general there are no representations for the conjunctives, although a few late manuscripts make use of the Tiberian signs for these. There is also no equal for low-grade disjunctives like as telishah gedolah: these are generally replaced by the similar of zaqef or revia. Absolutely nothing is identified of the musical realization associated with these signs, however it appears most likely that, when just about any of these types of signs had been connected with a musical theme, the particular motif has been utilized not necessarily to the specific word but to the entire phrase concluding with that break. (A somewhat comparable system is employed in manuscripts of the Qur'an, in order to guide the reader in fitting the chant to the verse, see Qur'an reading.)

This system is actually reflected in the cantillation methods of the Yemenite Jews, who now make use of the Tiberian symbols, but have a tendency to get musical motifs only for the disjunctives and render the conjunctives in a monotone. It is significant that the Yemenites possess just eight disjunctive motifs, thus obviously reflecting the Babylonian notation. The same is true of the Karaite mode with regard to the haftarah; whilst in the Sephardi haftarah modes different disjunctives frequently possess the same or closely similar motifs, decreasing the total number of efficient motifs to something like the exact same quantity.

Palestinian system

While the Babylonian system, as described above, is primarily concerned with showing breaks in the verse. Early Palestinian manuscripts, by comparison, are mainly concerned with exhibiting phrases: for example the tifcha-etnachta, zarqa-segolta and pashta-zaqef sequences, together with or without intervening unaccented words. These sequences are generally linked by a sequence of dots, beginning or closing using a dash or a dot in a different place to show which sequence is actually meant. Unaccented words (which in the Tiberian system bring conjunctives) are usually normally demonstrated by a dot following the word, as if in order to link it to the following word. There are separate symbols for much more sophisticated tropes such as pazer and telisha gedolah. The manuscripts tend to be very fragmentary, no two of them following quite the same conventions, and these marks may symbolize the specific reader's aide-memoire instead than a official system of punctuation (for example, vowel signs are often used just where the word might normally become unclear). In one manuscript, most probably of somewhat later date compared to the others, there are distinct marks with regard to different conjunctives, actually outnumbering those in the Tiberian method (for example, munach prior to etnachta has a distinct sign from munach before zaqef), and the overall system approaches the Tiberian in comprehen-

siveness. In some additional manuscripts, in particular those that contains Targumim rather of original text, the Tiberian emblems have already been added by a later hand. In general, it may be noticed that the Palestinian as well as Tiberian systems tend to be much more strongly related to each other than both is to the Babylonian.

This method of phrasing is shown in the Sephardic cantillation modes, in which the conjunctives (and to some degree the “near companions” such as *tifcha*, *pashta* and *zarqa*) are rendered as flourishes leading into the motif associated with the following disjunctive rather than as motifs in their own right. The somewhat sporadic employ of dots above and below the words as disjunctives is closely similar to that identified in Syriac texts. Kahle also notes a few similarity with the punctuation of Samaritan Hebrew.

Tiberian system

By the 10th century C.E., the chant in use in Palestine had clearly grow to be more intricate, equally due to the fact of the existence of *pazer*, *geresh* and *telisha* motifs in longer verses and the recognition of a phrase ending with a given sort of break varied according to the number of words and syllables within the phrase. The Tiberian Masoretes consequently decided to create a comprehensive notation with a mark on each word, to replace the fragmentary systems previously in use. In particular it was essential to invent a variety of diverse conjunctive accents to display exactly how to introduce and elaborate the main motif in extended phrases. (For instance, *tevir* is preceded by *mercha*, a short flourish, in smaller phrases yet by *darga*, a much more sophisticated run of notes, in longer phrases.) The system they created is the one in use nowadays, and is actually discovered in Biblical manuscripts such as the Aleppo Codex. A Masoretic treatise called *Diqduqe ha-te’amim* (precise guidelines of the accents) by Aaron ben Moses ben Asher survives, although both the actual names as well as the classification of the accents differ to some degree through those of the current day. As the accents were (and are) not necessarily shown on a Torah scroll, it was found necessary to have a individual making hand signals to the reader to demonstrate the melody, as in the Byzantine method of neumes. This system of cheironomy survives in a few communities to the present day, notably in Italy. It is speculated that both the shapes and the titles of a number of of the accents (e.g. *tifcha*, literally “hand-breadth”) may relate to the hand signals rather than to the syntactical functions or melodies denoted by them. These days in the majority of communities there is no system of hand signals and the reader learns the melody of every reading in advance.

The Tiberian system propagate quickly and was approved in all communities by the 13th century. Every community re-interpreted its reading custom so as to allocate one short musical motif to each symbol: this process has gone furthest in the Western Ashkenazi as well as Ottoman (Jerusalem-

Sephardi, Syrian etc.) traditions. Studying the accents and their musical interpretation is now an important component of the preparations for a bar mitzvah, as this is the first event on which a person reads from the Torah in public. In the early period of the Reform movement there has been a shift to abandon the system of cantillation and give Scriptural readings in regular speech (in Hebrew or in the vernacular). In latest decades, nonetheless, conventional cantillation has been recovered in many communities.

Differentiation in the poetic books

Psalms, Proverbs and Job The system of cantillation signs employed throughout the Tanakh is replaced by a quite distinct system for these three poetic books. Many of the signs may appear the same or comparable at first glance, but most of these function entirely distinct characteristics in these three books. (Only a few signs have functions similar to what they carry out in the rest of the Tanakh.) The short narratives at the beginning and conclusion of Job make use of the "regular" system, but the mass of the book (the poetry) uses the specific method. For this reason, these three books are usually referred to as *sifrei emet* (Books of Truth), the word *emet* meaning "truth", but also being an acronym pertaining to the first letters of the three books (*Iyov*, *Mishle*, *Tehillim*).

Notation

Modern musical notation began in the Roman Catholic Church, because monks sought to transcribe holy songs on to parchment. The series of dots and strokes could not express pitch or time, nevertheless was an aide-mémoire for those who currently knew the tune.

A method for naming musical notes has been introduced circa 1000 AD by the wise monk Guido d'Arezzo. This method has survived the passage of time and is referred to as tonic sol-fa right up until today. The most essential factor relating to this musical development is the fact that in those days it used six musical notes which are utilized in the major scale even today. Italy and France and other like Countries in Europe are now using these tonic sol-fa names as names for musical notes, rather than the alphabetical characters, however I think that this particular change only has taken place within the last two hundred years approximately.

To deal with the issue of exact pitch, a staff was introduced composed initially of a single horizontal line, but this became progressively extended till a system of four similar, horizontal lines was standardised. The up and down positions of every mark on the staff indicated which pitch or pitches this symbolized (pitches have been based on a musical mode). Although the four-line staff has remained available right up until the present day regarding plainchant, for other forms of music, staffs with differing numbers of lines

have been used at various periods and places for various instruments. The modern five-line staff was first implemented in France and became almost universal by the 16th century (although the utilization of staves along with other quantities of lines was still widespread well to the 17th century).

There are two basic approaches to notating music. Tablature (such as guitar chord diagrams) represents the actions a musician is to take (particularly, showing exactly where to put the fingers to make a given sound). Symbolic notation describes the sounds by themselves and consists of methods that vary from assigning pitches various letters of the alphabet in order to representing a given combination of notes by a graphic sign. The Western notation system brings together rhythmic notation (the appearance of a note indicates its duration) along with pitch notation (the line or space on a staff in which a note is positioned indicates its pitch). Therefore, just one symbol displays equally pitch and duration, and a string of these symbols notates both melody and rhythm.

The Book of Psalms contains musical notations that, though not really comprehended today, were used to chant the Psalms. In historical Egypt, Mesopotamia, Greece, Phoenicia and elsewhere musical instruments as well as engravings of the identical with musicians and cantors, appear on decorated walls and ancient monuments of temples, palaces and tombs.

How to write the modulations of the voice had been quite an additional issue. And here we find that ancient musical notation appears obviously to have developed into two branches, the difference between them depending on the taste or skills of different nations with regard to integrating into their music sounds of fixed pitch, or ornaments and graces which may be used in any kind of pitch based on the reciter's wish or requirements. At once the fact suggests itself to us that flutes or wind instruments would have a tendency to fix distinct pitch, whilst harps and guitars, owing to the convenience with which their *accordatura* or system of tuning could be modified, would be available for a constantly changing normal pitch, or diapason, as we some-what improperly term it.

Suzanne Haik-Vantura

Suzanne Haik-Vantoura (Ventoura) (July 13, 1912 October 22, 2000) was an organist, music teacher, composer as well as music theorist. Her *magnum opus* had been within the area of musicology.

Vantoura was born in Paris on July 13, 1912. In 1931 Vantoura began studying at Conservatoire National Supérieur de Paris, (CNSMDP), and in 1934 has been granted First Prize in Harmony. Four years afterwards, she was awarded First Prize in Fugue (1938). She has been a pupil of the great organist and composer Marcel Dupré from 1941 to 1946.

During World War II, Vantoura and her family fled from the Nazis to



Figure 11: Suzanne Haik-Vantura

southern France. There she researched the cantillation marks, (melodic accents or Ta'amim), in the Hebrew Bible (Masoretic Text). Following the war she paused this work, until her pension in 1970.

Her old teacher Marcel Dupré and others advised her to complete her work on Ta'amim. Immediately after her retirement in 1970, she devoted herself for the task and (by her very own testimony) has been overwhelmed at occasions through the utter size of it.

The earliest full, extensive, and completely understandable manuscripts of music date no sooner than the 9th and 10th centuries, just a bit before the start of the middle ages period of time. Any kind of interpretation of music supposed older than that is going to be in the domain of reconstructions, projections, presumptions, and in some cases downright quackery and all of that is in evidence here.

She passed away October 22, 2000 in Lausanne, Switzerland at the age of 88. Her husband Maurice Haik had died in 1976. The couple had no children.

"By dint of deductions as well as tests," she managed to "decode" the particular 19 signs positioned above and below the Hebrew text, among the vowels and suggested a code with regard to musical prosody and chanted cantilée biblical: an excellent source "to look at each and every verse and each word of the ancient prayer, as though the particular pulsing rhythms of world beat..." (André Chouraqui.)

The signs associated with this particular notation called Tiberias had been "disclosed" within the 9th century by the rabbis Masorettes but their musicianship, according to S. Haik-Vantoura, had been lost after the fall of

the Second Temple of Jerusalem (70 AD.).

The Levitical priests, the son of Zadok, the one which King Solomon (tenth century BC. JC) designated priest of the temple (I Kings 2, 35 and Ezekiel 44, 15-16) had been totally linked with the texts as were the Karaites (Son of writing) to which in turn were attached Masoretes largely. Fearing how the tradition of singing the temple not forgotten, it is feasible, therefore, clarifies Suzanne Haik-Vantoura, Karaites that these experts have made the decision to share for their contemporaries, musical code structured straight into nineteen signs regarding which we are rediscovering nowadays abundant and motivated musical force.

The Methodology

The musical notation of the Bible consists of 19 signs named Té'amîm: Té'amim means: taste, savor the food and also in that of intonation intelligence; reason; question; order. Someone has "common sense" or ta'am; faculty, a common sense and knowledge.

These signs have two purposes: that of prosody (prose) and that of psalmody: poetry.

The té'amîm are placed either below or above the Hebrew text, including vowel points:

Upper or lower, the signs have a totally different meaning: lower signs represent sounds of fixed height, evolutive, the height of the sounds are represented by the signs above them is conditional and depends on the height of the fixed scale-degree that precedes them.

The signs below represent successive degrees of a scale to the extent of the human voice.

There are eight signs below in prosody, seven in the chanting.

The schools of interpretation of the signs

Three schools have worked to fix the writing of the Hebrew accents Tee Amim, or musical signs of the cantillation.

The first Jewish school: dot notation; The Babylonian school, which notes per syllable lines above using the initial of each ta'am and The school of Tiberias (manuscript type Moses Ben Asher, ninth century) that is based on the first system combines Jewish and points, lines, hooks and circles.

This is the system that has emerged around and came to an extraordinarily nuanced performance of all possible connections between the words under the action of the weight of emphasis.

This triple system in their connections: tonal values, names and their meanings, graphic signs form an indivisible whole, in the full knowledge of the signs. Thus the revelation of the meaning of names, and credits that it imposes, interrogate the history of the sources of this notation.

PSAUME 133

שִׁיר הַמַּעֲלוֹת לְדָוִד הִנֵּה מֵה־טוֹב וּמֵה־נָּעִים

(1) Cantique des montées. De David. Voyez! Qu'il est bon, qu'il est doux



שִׁבְתָּ אֶחָיו גַּם־יַחַד: כֶּשֶׁמֶן הַטוֹב עַל־הָרֹאשׁ יֵרֵד

d'habiter en frères tous ensemble! (2) C'est une huile excellente sur la tête, qui descend



עַל־הַזָּקֵן וְעַן אֶדְרֶן שִׁירָד עַל־פִּי מִדּוֹ

la barbe, | sur la barbe d'Aaron, qui descend sur le col de ses tuni-



תִּיּוֹ: כְּטַל־חֶרְמוֹן שִׁירָד עַל־הַרְרֵי צִיּוֹן כִּי

ques. (3) Comme la rosée de l'Hermon, qui descend sur les hauteurs de Sion; car



שֵׁם צִוְּהָ יְהוָה אֶת־הַבְּרָכָה חַיִּים עַד־הָעוֹלָם

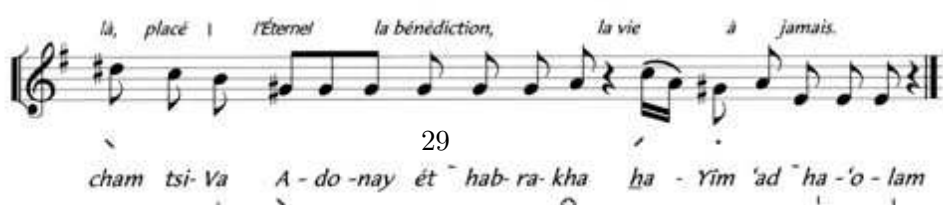


Figure 12: Cantillation signs

“God has arranged the universe so that the world is harmony... and the pure song, the fundamental has harmonized the whole... according to the will of God for which his father David enthused.” (Clement of Alexandria)

The deciphering of these signs will make music for all 24 books of the Bible.

Appendices

Names and Meaning of the Signs

Azla: “Going away”, because it is often the end of the phrase ‘Qadma ve’Azla’.

Darga: “Trill” from its sound, or “step” from its shape.

Etnachta: “Pause, rest” because it is the pause in the middle of a verse.

Geresh: “Expulsion, driving out”. Reason not clear.

Gershayim: Double Geresh, from its appearance.

Mahpach: “Turning round”. In old manuscripts, it was written like a U on its side, hence like someone doing a U turn. In printed books, it has a V shape, possibly because that was easier for the early printers to make. In Eastern communities it is called shofar mehuppach, “reversed horn”, because it faces the other way from shofar holech (munach)

Mercha: “Lengthener”, because it prolongs the melody of the word that follows. In modern usage it sometimes means “comma”, but this usage is taken from the cantillation sign.

Mercha-kefulah: Kefulah means “double”, because it looks like two merchas together. There are only five in the whole Torah: Gen. 27:25, Ex. 5:15, Lev. 10:1, Num. 14:3, Num. 32:42.

Munach: “Resting”, because it may be followed by a short pause, or because the shape is a horn lying on its side. (In Eastern communities it is called shofar holech, horn going forward.) Munach legarmeh (munach on its own) is a disjunctive, used mainly before revia, but occasionally before a pazer. It may be distinguished from ordinary munach by the dividing line (pesiq) following the word.

Pashta: “Stretching out”, because its shape is leaning forward (or in reference to a hand signal).

Pazer: “Lavish” or “scatter”, because it has so many notes.

Qadma: “To progress, advance.” It always occurs at the beginning of a phrase (often before other conjunctives) and its shape is leaning forward. In particular it is the first member of the Qadma ve-Azla pair.

Revia: “A quarter”, either because it has four short notes as well as the main one, or because it splits the half verse from the start to etnachta (or etnachta to the end) into quarters (as it ranks below zaqef, the main division within the half verse). The square or diamond shape of the symbol

is coincidence: in most manuscripts, it is simply a point. Another possibility is that it was regarded as occupying the fourth level in the hierarchy.[8]

Segol: "Bunch of grapes" (from its shape, which looks like a bunch of grapes).

Shalshelet: "Chain", either from its appearance or because it is a long chain of notes. There are only four in the whole Torah: Gen. 19:16, 24:12, 39:8; Lev. 8:23.

Sof Pasuq: "End of verse": it is the last note of every verse. It is sometimes called silluq (taking leave).

Telisha Qetannah/Gedolah: "Detached" because they are never linked to the following note as one musical phrase; Qetannah = small (short); Gedolah = big (long).[9]

Tevir: "Broken", because it represents a break in reading (in some traditions there is a big jump down in pitch between the first and second notes).

Tifcha: "Diagonal", or "hand-breadth". In old manuscripts, it was written as a straight diagonal line. In printed books, it is curved, apparently to make it a mirror image of Mercha, with which it is usually paired (the two together could be regarded as forming a slur). The name "tifcha" may be an allusion to a hand signal.[10]

Yetiv: "Resting" or "sitting", because it may be followed by a short pause, or more probably because the shape is like a horn sitting up. (In the Italian tradition, it is called shofar yetiv, sitting horn.)

Zaqef Qaton/Gadol: "Upright" (from their shape, or in allusion to a hand signal); Qaton = small (short); Gadol = big (long).

Zarqa: "Scatterer", because it is like a scattering of notes.

Numbers 35:5 (in Parshat Mas'ei) has two notes found nowhere else in the Torah:

Qarne Farah: "Horns of a cow" (from its shape), sometimes called pazer gadol.

Yerach ben Yomo: "Moon one day old" (because it looks like a crescent moon), sometimes called galgal (circle).

Sequences

The rules governing the sequence of cantillation marks are as follows.

1. A verse is divided into two half verses, the first ending with, and governed by, etnachta, and the second ending with, and governed by, sof pasuq. A very short verse may have no etnachta and be governed by sof pasuq alone.
2. A half verse may be divided into two or more phrases marked off by second-level disjunctives.
3. A second-level phrase may be divided into two or more sub-phrases marked off by third-level disjunctives.

4. A third-level phrase may be divided into two or more sub-phrases marked off by fourth-level disjunctives.
5. The last subdivision within a phrase must always be constituted by a disjunctive one level down, chosen to fit the disjunctive governing the phrase and called (in the Table below) its "near companion". Thus, a disjunctive may be preceded by a disjunctive of its own or a higher level, or by its near companion, but not by any other disjunctive of a lower level than its own.
6. The other subdivisions within a phrase are constituted by the "default" disjunctive for the next lower level (the "remote companion").
7. Any disjunctive may or may not be preceded by one or more conjunctives, varying with the disjunctive in question.
8. A disjunctive constituting a phrase on its own (i.e. not preceded by either a near companion or a conjunctive) may be substituted by a stronger disjunctive of the same level, called in the Table the "equivalent isolated disjunctive".

Groups

The following sequences are commonly found.

First level phrases (Mercha) Tifcha (Mercha) Sof-Pasuq: The group that occurs at the end of each pasuq (verse), and always includes the Sof-Pasuq at the very minimum. Either or both of the Mercha's may be omitted.

(Mercha) Tifcha (Munach) Etnachta: one of the most common groups, but can only appear once in each pasuq. Tifcha can appear without a Mercha, but Mercha cannot appear without a Tifcha (or other following disjunctive). Etnachta can appear without a Munach, but Munach cannot appear without an Etnachta (or other following disjunctive). Munach-Etnachta can appear without a Mercha-Tifcha, but a Mercha-Tifcha cannot appear without a Munach-Etnachta (or Etnachta on its own).

Second level phrases (Mahpach) Pashta (Munach) Zaqef Qaton: one of the most common groups. Pashta can appear without a Mahpach, but a Mahpach cannot appear without a Pashta. Alternatively, Yetiv can appear on its own in place of Pashta. Zaqef Qaton can appear without a Munach, but a Munach cannot appear without a Qaton (or other following disjunctive). The Munach-Zaqef Qaton sequence can appear without the Mahpach-Pashta, but the Mahpach-Pashta cannot appear without the Zaqef Qaton.

Zaqef Gadol: Not a part of a group, as it replaces a Zaqef Qaton sequence.

(Munach) Zarqa (Munach) Segol: Zarqa is only ever found before Segol; a Munach may precede either one.

Shalshelet: Not a part of a group, as it replaces a Segol sequence. Occurs only four times in the Torah, and always at the beginning of a verse.

Third level phrases Munach | Munach Revia: The following combinations occur: Revia on its own; Munach Revia; Darga Munach Revia; Munach-with-Pesiq Revia; Munach-with-Pesiq Munach Revia. (Munach with Pesiq is a disjunctive, separate from Munach proper, and also known as Munach legarmeh, munach on its own.)

Darga Tevir: Tevir is found either alone or preceded by Darga or Mercha. Darga occasionally precedes other combinations (e.g. Darga Munach Revia).

Mercha Kefula: Occasionally preceded by Darga, but usually on its own. Occurs only five times in the Torah, and once in Haftarah. Its function appears to be similar to Tevir.

Fourth level phrases Qadma v'Azla: This pair is known as such when found together, and may precede a Mahpach, a Revia group or a Tevir group. A Qadma can also be found without an Azla before a Mahpach, and an Azla without a Qadma is known as Azla-Geresh or simply Geresh. Gershayim on its own fulfils the same function as Qadma v'Azla, in that it can precede either a Mahpach, a Revia group or a Tevir group.

Pazer: Not considered part of a group, but usually followed by a Telisha Qetannah or a Telisha Gedolah. It may be preceded by one or more Munachs.

Telisha Qetannah/Gedolah: Not considered a part of a group, usually appears individually, sometimes after a Pazer. It often precedes Qadma.

Yerach ben Yomo Qarnei Farah: The rarest group of all. Occurs only once in the whole Torah, in the parashah Masey, on the words alpayim b'ammah (two thousand cubits). It is equivalent to Munach Pazer.

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