This paper exhibits a variety of different shofar shapes and sounds. It discusses their ethnicity, etymology, and transformation from animal to instrument and illuminates how traditional shofar blasts relate to historical and symbolical issues. (The talk concluded with a presentation of the shofar as an artistic instrument integrated into a contemporary composition by the author.)

Introduction

The shofar or ram’s horn is the oldest liturgical Jewish instrument still functioning today. Played during liturgical worship, its shape, sound, and symbolism are integral to the High Holiday season where it is blown each day during the month of Elul and the Ten Days of Penitence during the month of Tishre, either preceding (Sephardic ritual) or following (Ashkenazi ritual) morning services in the synagogue. More than that, it is showcased during each of the two days of the New Year (Rosh Hashanah), where it is sounded 100 times, and blown once again at the close of the Day of Atonement (Yom Kippur).

Shofar: a Magical Instrument

The shofar has always been considered a magical instrument. Its appearance is first associated with the revelation of God’s voice at Mount Sinai:

‘And it came to pass on the third day, when it as morning, that there were thunders and lightnings and a thick cloud upon the mount, and the voice of a horn exceeding loud; and all the people that were in the camp trembled.’

(Exod.19:16)

Its intrinsic power was recognized and by Joshua, who brought down the walls of Jericho with shofar blasts:

‘So the people shouted, and [the priests] blew with the horns. And it came to pass, when the people heard the sound of the horn, that the people shouted with a great shout, and the wall fell down flat, so that the people went up into the city, every man straight before him, and they took the city.’

(Jos. 6:20)

These miraculous feats may seem strange to a world overburdened with blaring sirens and loud speakers, but in the ancient world sound was known to influence matter.

Covering the shofar when not being blown, for example, is explicitly stated in the Code of Jewish Law:

‘After all the “Tekiot” have been sounded…the shofar should be hidden, to make certain no more sounds are made.’

(Shulhan Aruch 129.17)

It is a vestige of ancient taboo forbidding the sight of sacred implements.

Anthropologists ascribe many powers to the horn, including frightening away evil spirits and demons. Thus, Jewish tradition appropriated its sound on the New Year to chase away:

‘...the prosecuting attorney on Judgment Day.’

(Talmud Rosh Hashanah 16b)

In line with this reasoning is another vestige from prehistory regarding the laws of blowing a shofar from a pit:

‘If someone blows [the shofar] in a well or in an underground masoned store-room, or in a large cask, and one heard the sound of the shofar, he has fulfilled his obligation; but if he heard the sound of the echo, he has not done his duty.’

(Mishnah Rosh Hashanah 3.7)

The obligation to hear a shofar must be made through direct contact with the sound itself, not by way of echo (or broadcast). The issue of what someone is doing in a pit blowing a shofar, however, is never discussed. However, the issue was rationalized by scholars of later generations:

‘...in times when it cost one's life to observe religious commandment, men crawled into
cisterns, into cellars, into vats if necessary, to hear the required shofar sounds."

(Judah Golden)

I see this as a revisionist view of Jewish history. What later scholars failed either to realize or neglected to consider was that in the primitive world view blowing into a cavity in the earth was a fertilization charm, a call to renewal of life from the bowels of the earth.

Anthropology informs that the Negroes of Loango dip trumpets into a barrel. New Hebridians do so into the hollow of a tree trunk while Singhalese put them into pots or into a cavity in the earth. The echoed resonance of sounds produced in this way must have been awesome. The idea of creating unnatural and terrifying sounds on sacred instruments seems to be a residue from Late Neolithic culture persisting into biblical times. We get a hint of this same visceral contact with the resonance of sound and the trembling of the earth in Scripture, so great was:

‘...the sound that the earth rang again.’

(2 Sam. 4:5)

Perhaps, what disturbed the Rabbis of the Mishnah was not the power of unnatural, echo induced sounds, but their association with magic and idolatry. It bespeaks a keen sensitivity to inanimate nature and natural phenomena which later generations neglected in favor of overintellectualism.

Shape: from animal to instrument:

It is generally accepted that the shofar is a ram’s horn; many translations thus translate the word, shofar (i.e., horn, trumpet, ram’s horn).

The Code of Jewish Law specifically states:

‘the command of blowing the shofar on Rosh Hashanah is fulfilled only on a curved ram’s horn.’

(Shulchan Aruch 586.1)

This follows Talmudic injunction:

‘Blow me a ram’s horn that I may remember unto you the binding of Isaac.’

(B.T., Tractate Rosh Hashanah 16a)

It is a key to the choice of ram’s horn for shofar. But, why must the horn be curved? Rabbi Saadiah Gaon (882-942), who was a leading figure in medieval Judaism, and head of the academy at Sura, Babylonia, notes the relationship between the shape of the horn, its sound, and its symbolism. For him it is a call to humility, a bending of the will:

‘When we hear the blowing of the ram’s horn we fear and tremble and “bend our will” to the Will of the Creator.’

His ten mystical interpretations on the meaning of the shofar are based on Scripture and Kabala. Frequently cited, they are printed in nearly every Jewish High Holiday prayer book.

Saadiah Gaon: Ten Meanings of the Shofar

1. The Shofar is like the trumpet which announces the coronation of a king. (Psalm 98:6)
2. The Shofar calls us to examine our deeds and return to God in contrition and penitence. (Isa. 55:6)
3. The Shofar reminds us of the Shofar which was blown at Mt. Sinai. (Exodus 19:16)
4. The Shofar reminds us of the Prophets, whose voices rang out like Shofar blasts. (Amos 3:6)
5. The Shofar sounds like crying, reminding us of the destruction of the Temple. (Jeremiah 4:19-20)
6. The Shofar reminds us of the binding of Isaac. (Genesis 22:13)
7. The Shofar calls us to humility before the might and majesty of God. (Psalm 47:6-7)
8. On the Day of Judgment, a Shofar will be blown. (Zephaniah 1:14-16)
9. The Shofar foreshadows the return of Israel’s exiled to the Holy Land. (Isaiah 27:12-13)
10. The Shofar will be blown to announce the resurrection of the dead and the redemption of the whole world. (Isaiah 18:3, 27:12-13)

Fig. 1. Rams (male sheep).

But, are all shofars ram’s horns? Is a shofar necessarily a ram’s horn? The Mishnah doesn’t think so:
All kinds of shofar are valid except that of a cow [or bull or ox] because this is a horn [keren].’
(Mishnah Rosh Hashanah 3.2)

The Jewish Tradition forbids the use of cows’ or bulls’ horns because they are associated with the worship of the Golden Calf:

‘These be thy gods O Israel.’ (Exod. 32:8) and idolatry, ‘Now they sin more and more; they make idols for themselves …’ ‘They offer human sacrifice and kiss the calf-idsols.’
(Hosea 13:2)

Such a horn is called a keren, but never shofar, because a curved ram’s horn is used in remembrance of the ram which replaced Isaac as a sacrifice on Mount Moriah (Gen. 22:13). Otherwise, the horns of a sheep, a goat, a deer, a gazelle, even an antelope may be used.

Some claim the ancient Hebrews derived the term shofar from the Assyrian word for wild goat, shapparu. The wild goat (Heb. Yaël) is indeed a biblical animal. It is referred to in Psalms:

‘the high mountains are for the wild goats (yaélím).’
(Ps. 104:8)

The Mishnah confirms that:

‘...the shofar for the New Year was of a wild goat, straight.’
(Rosh Hashanah 3.2)

However, historic opinions differ as to when the wild goat horn is used and when the ram’s horn is blown. Rabbi Yehuda maintains, for example, that:

‘On the New Years they sounded those of males [male-sheep or rams] but at the Jubilee on those of wild goats.’
(Mishnah Rosh Hashanah 3.5)

For generations, some Yemenite communities blew the long straight horn of the ibex or wild goat found in their regions while others blown the large horn of an antelope.

In other geographic locations the horn of goats was blow, because goats were more prevalent in their areas and easier to come by. Such was the case for the Jewish communities of Holland and Italy.

Other commentators derive the term shofar from the Hebrew word sheforferet or a long empty pipe, since, in essence, the shofar is an empty tube made from keratin - a tough fibrous protein found in hair, nails, and hoofs. Its sound emerges from the hollow interior. This simple fact has been the source for allegory, teaching the moral lesson that ‘man must empty himself of pride before addressing the Almighty’.

Fig. 2. Ibex or wild goat.

The Process of Making Shofars

There are only a handful of commercial shofar makers in the world, many of them in Israel. Large quantities of African horns come in their natural state. Many are cracked or broken. Their surface is rough. The inside is filled with cartilage. Cracks cannot be repaired and the horn is discarded. Only about 30% are usable:

‘A shofar that is split, and someone stuck it together, is unfit. If one cemented together pieces of a shofar, this is invalid’
(Mishnah Rosh Hashanah 3.6).

After selection, the inner cartilage is removed as if the instrument is stoppered it is both unusable and invalid. Then the horn is placed in an oven and heated to kill worms, insects and other parasites clinging in its inner surface. If these are not removed they eventually cause damage to the horn. The most difficult stage is the shaping - a well guarded secret. There are various stages of finition. Some horn are left unpolished while others, like the Ashkenazi shofar are first straightened, then curved and polished until smooth and shining. These procedures take many hours. In ancient times these skills were considered cutting-edge of human technology.

The narrow mouthpiece of the shofar is made from the tip of the horn, while the broad bell of the shofar is that part of the horn that was attached to the head of the animal.
The Sages of Ancient Israel likened the shape of the shofar to the cry of the Psalmist:

‘Out of my distress I called unto Thee. He answered me [from the broad place] with enlargement.’

(Ps. 118:5)

Allegorically, the sound produced from the narrow mouthpiece reaches up and projects through the broad bell, to the Creator, who hears and responds to the call. It is for this reason that the shofar is blown from the narrow end. This perception has been codified into Jewish law:

‘He who blows from the broad end of the shofar has not fulfilled his obligation.’

(Shulchan Aruch 590.9)

The tip of the animal horn is sealed. It must be opened in order to form a mouthpiece. This aperture is made in two ways, either by cutting off the edge, or, by boring a hole in the end. Both methods affect the tone. The mouthpiece produced by first cutting off the edge and then removing the inner wall is the method, used for producing the Iraqi (Babylonian) and Yemenite shofar. Cutting off the edge gives the horn a strong projection, but leaves it with limited tonal flexibility. Ashkenazi and Sephardic shofars, on the other hand, are made by boring a hole into the narrow end, and then, shaping the aperture outwards. This method produces a softer tone, but more flexible and richer in overtones.

Shofars come in many shapes and sizes. Each change in size and shape affects the tone. The Ashkenazi shofar blast begins with a low note and swells into a higher note. The sound emission is choked as if it came from the head register of the voice. Legend tells us why: Hundreds of years ago when the Polish nobility went to war, it was their custom to blow shofars. Thus when the Jews blew the shofar on Rosh Hashanah, it frightened the Poles who thought that war had broken out. This false alarm aroused the Poles’ violent temper. This is why, in order not to anger their Polish neighbours, that the Jews dampened the sound of their shofars. The Jerusalem Talmud (Rosh Hashanah 4.8) relates a similar story which took place during the Roman period, nearly 2,000 years ago.

Originally the shofar was blown only once on the Jewish New Year, before the reading of the Torah (instead of three times, as it is today, firstly after the Torah reading, secondly during the silent standing rendition of the Additional Prayer, and thirdly on the audible repetition of this prayer by the cantor). However, on this occasion, Roman authorities, alarmed at the early shofar blasts of the Jews, took them as a sign of rebellion and ordered their soldiers to massacre the Jews. Consequently, the Sages prohibited shofar blowing in the morning and transferred the blasts to the Additional (Musaph) Service, later in the day.

When the prohibition was annulled many years later, the original Shofar Service was restored, while the additional blowing, with the congregation standing, was retained. A mystic interpretation was later given for the extra two sets of shofar blasts – to confuse Satan [or the Devil].

In contrast to the gently curved Ashkenazi shofar, and the large, often half polished, Yemenite shofar, the Sephardic shofar is flat and straight. Its blast causes much echo, so much so that those in its immediate vicinity tremble. Some claim the sound expresses victory and success.

The reason for the shape is historical. In medieval Spain it was forbidden for Jews to go out in public with a shofar and blow it. They had to hide it under their belts and the straight shape made it easier to hide. The Sephardic community keeps this custom till today. The Iraqi or Babylonian shofar is the most highly polished and difficult to produce. (The thickness of the walls and depth of color indicate the maturity of the ram’s horn.)
Horns are usable from one year onwards. Those five years old, for example are darker in color and have thicker walls than those of only one or two years old.

Fig. 4. Ashkenazi shofar.

Fig. 5. Sephardic shofar.

Fig. 6. Babylonian shofar.

Sound: The Shofar Blast

The sounding of a shofar is called a blast or call. It contains all the sounds that can be produced on a single breath – the breath of life. Sometimes these sounds are many, at other times, only few, sometimes they are oscillate between different pitches, while at still other times the sound produced is a single, elongated tone.

Origins

The origin of the shofar blasts dates from time immemorial, beginning with the giving of Torah (Exod.19:16-19). But exactly in what the sequence these traditional sounds were blown is lost to posterity. We do know that the shofar was sounded on may occasions as a signaling instrument: to assemble the people for war (Jer. 4:5, 19), for highlighting religious events (2 Chr. 15:28), to warn of approaching danger (Ez. 33:4-5), to announce the New Moon (Ps. 81:3), in Divine praise (Ps. 98:6), announcing the Sabbath (T. Shabbat 7a), to announce the Jubilee Year (Lev. 25:9), at excommunications (T. Sanhedrin 7b), and at funerals (Moed Katan 27b). Today the shofar is blown mostly in connection with liturgical synagogue ritual on the New Year.

The Call or Blast

There are basically three sounds (sometimes cited as four). Each is considered a blast. Everything about the blasts centers on the number three (a point we will take up later in the next section).

1. TEKIAH: An unbroken sound about three beats long.
2. SHEVARIM: A series of three broken sounds (each about a beat long).
3. TERUAH: A series of nine (or more) staccato-trembling sounds (three beats long).
4. TEKIAH GEDOLAH: A prolonged, unbroken sound about nine beats long.

The duty of making and hearing these sounds is a Divine statute, given without any logical reason. Torah commands:

‘And in the seventh month, on the first day of the month, ye shall have a holy convocation: ye shall do no manner of servile work; it is a day of blowing the horn unto you’ (Num. 29:1). Liturgy obliges us to ‘hear nine (9) blasts of the shofar in order to fulfill the commandment [of hearing the shofar] on Rosh Hashanah’ (Maimonides: Mishneh Torah 3.1).

This follows the prescription from Mishnah Rosh Hashanah 4.9:

The manner of sounding three of three. The length of the sustained not (tekiah) is the same as three quavering notes (shevarim). The length of a quavering note is equal to three wailing notes (teruah).
The entire sequence is as follows:

Fig. 7. Tekiah (1), Shevarim-Teruah (2), Tekia (3), Tekiah (4), Shevarim (5), Tekia (6), Tekiah (7), Teruah (8), Tekia Gedolah (9)

The order of calls or blasts, as indicated above, was fixed in Babylon by the third century of the Common Era.

While their order and manner of sounding may seem obvious to us today, it is stupefying to discover how unclear and bewildered were for the early Rabbis, whose creativity and ingenuity derived the order and manner of shofar blasts from various Scriptural sources (or perhaps, rationalized them from an already extant oral tradition). The essence of the problem and its formulation is to be found in the bold-faced central shevarim-teruah sounds, which includes both the medium length shevarim and the rapidly repeated teruah notes as alternative versions of an earlier, archetypical teruah. The various sustained tekiot and tekiot gedolot which encase them are, in fact, introductions and closings. The Sages derived this three-fold sounding formula: introduction, blast, conclusion, from Scripture, with uncanny insight.

Three times the Torah command us to sound Teruah. First in Leviticus 23:24,

‘in the seventh month, in the first day of the month shall be a solemn rest unto you, a memorial ‘proclaimed’ with the ‘blast’ (teruah) of horns, a holy convocation.’ Then in a second reference, which appears in Leviticus 25:9, then shalt thou make ‘proclamation’ with the ‘blast’ (teruah) of the horn on the tenth day of the seventh month shall… ye shall make ‘proclamation’ with the horn throughout your land.

The third appearance is found in Numbers 25:9, ‘and in the seventh month, on the first day of the month, ye shall have a holy convocation…it is a day of ‘blowing’ the horn unto you.’ Their thinking was that because the term blast or teruah appears in three separate verses of Scripture (Lev. 23:24, 25:9, and Num. 25:9), the sounding of the shofar must be made three times to be complete. But, because, in each verse the blast is to be proclaimed, these announcements (or proclamations) framing the blast, also appear three times. Thus, the tekiah is, in fact, a proclaiming or showcasing sound. It surrounds the teruah, announcing and closing its call. In time, the insights of the Sages became standard formulation, codified into Jewish law (halacha). The form and frame of the blasts had been derived from Scripture. Thus, they learnt from these three passages that each teruah is actually three (3) blasts, because it to be preceded and followed by the sustained Tekiah calls. The enigmatic content and quality of the calls, however, would require further conundrum.

Again, the problem centered about the term teruah. What is teruah? How did it sound? How was it blown? What did it connote? Conflicting opinions regarding its meaning, and consequently, its sounding, led to dual interpretations derived from the original biblical term teruah.

The Aramaic Targum by Onkelos (2nd C.) translates the word teruah as yabavah. It is a rare term, found only once in Scripture, towards the end of the Song of Deborah, the mother of Sisera looked out at a window and cried (yabev) through the lattice (Jg. 5:28). Commentators are puzzled: What was this cry? Was it a moan or a sigh, a terrified shriek or a joyous shout? The confusion was resolved by combining moans and sighs (shevarim) and piercing cries (teruah) together, into a single blast made up of longer and shorter sounds, shevarim-teruah - a broken sound and a resplendent one. It was a compromise solution.

Transposing the Aramaic, yabev, back into Hebrew, conjures up the image of the shofar as an instrument lament. This perspective on the voice of the shofar was later framed into Jewish Law. ‘They sound the shofar on account of any calamity upon the public: [rainfall, pestilence, mildew, locusts, wild beasts, sword,’ etc.]

(Mishnah Taanit 3.8).
But, this solution reveals only one side of a complex picture, for in other places, teruah has an entirely different character, neither a sigh nor a cry, but a joyous shout, ‘and when the Ark of the Covenant of the Lord came into the camp, all Israel shouted with a great shout (teruah). So great was the sound that the earth rang again.’ (2 Sam. 4:5). Still, the ambiguity surrounding teruah (as cry and as shout) has led to further different traditions regarding its sounding or performance practice. In the West, Ashkenazim interpret the teruah as a series of short, but separate staccato notes. Whereas, in the East, Sephardic and Orientals interpret it as a tremolo produced with the tongue.

Law and custom commands us to sound the shofar 100 times on Rosh Hashanah. Midrash tells us that the reason is that Sisera’s mother sighed 100 times. The Sages rationalized this prescription, as follows, utilizing the very same verses that contained Sisera’s mother’s yabev, they observed that these sighs are confirmed by the 100 Hebrew letters contained in these verses (Judges 5:28-29) (according to my count 101 letters). Thus we derive the requirement to sound the shofar 100 times.

Below we indicate how these blasts or breaths are counted. Again, please note that while shevarim-teruah are generally sounded in a single breath, they may also be performed in two quick breaths, which are necessary (in this case) in order to rationalize the count into 10 blasts for each set (There is a justification for counting shevarim-teruah as one blast. In that case the counting of a set is 9 blasts and 3 sets as 27 blasts or 3 x 9.). These sets, then, are collectively combined in order to reach the required 100 blasts. The shofar was sounded thrice in the shofar service, thrice in the silent Additional Service, and again, thrice in the Readers repetition of the Additional Service, and once during the final Kaddish. The following indicates a single set and the calculations involved.

**Shofar Service Blasts**

- Tekiah (1), Shevarim (2) Teruah (3), Tekiah (4)
- Tekiah (5), Shevarim (6) Teruah (7), Tekiah (8)
- Tekiah (9), Shevarim (10) Teruah (11), Tekiah (12)
- Tekiah (13), Shevarim (14), Tekiah (15)
- Tekiah (16), Shevarim (17), Tekiah (18)
- Tekiah (19), Shevarim (20), Tekiah (21)
- Tekiah (22), Teruah (23), Tekiah (24)
- Tekiah (25), Teruah (26), Tekiah (27)
- Tekiah (28), Teruah (29), Tekiah Gedolah (30)

**Additional Service (Silent) (performed three times)**

- Tekiah (1), Shevarim (2) Teruah (3), Tekiah (4)
- Tekiah (5), Shevarim (6), Tekiah (7)
- Tekiah (8), Teruah (9), Tekiah (10)

**Additional Service**

(Readers repetition) (performed three times)

- Tekiah (1), Shevarim (2) Teruah (3), Tekiah (4)
- Tekiah (5), Shevarim (6), Tekiah (7)
- Tekiah (8), Teruah (9), Tekiah (10)

**Kaddish (final)**

- Tekiah (1), Shevarim (2) Teruah (3), Tekiah (4)
- Tekiah (5), Shevarim (6), Tekiah (7)
- Tekiah (8), Teruah (9), Tekiah Gedolah (10)
Calculation

(Shofar Service)
12 blasts + 9 blasts + 9 blasts = 30
(Additional Service) (Silent)
10 blasts X 3 = 30
(Additional Service) (Readers repetition)
10 blasts X 3 = 30
(Kaddish) (final)
10 X 1 = 10
100 blasts

Symbolism: The Shofar Blast

We have noted above that everything connected to the shofar blast is associated, in one way or another, with the number 3. This holds true also for the rhythm of the blasts as well.

Moses Maimonides (1135-1204), foremost mediaeval Jewish philosopher and commentator informs:

‘The manner of sounding is three of three each. The length of the sustained note (tekiah) is the same as three quavering notes (shevarim); the length of a quavering note is equal to three wailing notes (teruah). If one sounded the first sustained note and then prolonged the second not for as long as two [2X3], it counts as only one.’

(Mishneh Torah, Rosh Hashanah 4.9).

The following is the order of shofar sounds as described in standard halachic texts or as they appear written out in High Holiday prayer books. Many shofar blowers, however, vary them according to local custom, inherited tradition, and personal inclination. This is particularly notable in the sounding of teruah where callers, in addition to the staccato or tremulous renditions noted above, may also, often, add extra notes to this basic framework. Thus, the nine tones of teruah is frequently interpreted as 3 quick sets of 6 tones, or even, 3 sets of 9 very rapid notes, making 18 or 27 sounds (9x2 or 9x3). All of these variants, however, keep to the original temporal-spatial durations as outlined by the original 9 sounds. Significantly, changes are not made in the external structure and time-frame, but rather in the internal content. This is tonal content is decorated, mostly by elaborating the shevarim with a leading grace-note from below, or intensifying the teruah by filling in its durational space with many more rapid notes.

In addition, it should be noted that the initial and closing, tekiot, which frame the teruah, also balance the combined durations of shevarim and teruah, and when linked, become 6 beats long (3 beats + 3 beats). That is, the external tekiot expand to sustained, 6 beat-long sounds in order to counter-balance the combined durations of shevarim-teruah.

The standard 9 beat structural frame

Tekiah (6 beats)/Shevarim (3 beats)-Teruah (3 beats)/Tekiah (6 beats)
Tekiah (3 beats)/Shevarim (3 beats)/Tekiah (3 beats)
Tekiah (3 beats)/Teruah (3 beats)/Tekiah Gedolah (9 beats)

Visualized durations of the 9 beat structural frame

_____ /  -  -  -   ...   ...   ... /  _____
___ /  -  -  -   ...   ...   ... /  ___
___ /      ...   ...   ... /  _______

There is yet another way of rationalizing the nine beat count. This is by considering each line as a totality and considering it a ‘conceptual beat’, as it were. If one views the blasts this way, then three repetitions of the three lines of blasts, as shown in the Shofar Service blasts (above), might be considered as nine ‘conceptual blasts’ as well. In all, no matter how we turn it, the number nine keeps coming up.

Magical Numbers

From the above, it is clear that the intricate proportionality of traditional shofar blasts is not folklore. They were constructed according to a science of numbers known from remote antiquity and developed into a symbolic system by the Egyptians, Sumerians, Babylonians, Assyrians, and Greeks. The Jewish Sages and Soferim who arranged the prescribed shofar blasts were intimately acquainted with this mystical Kabala of numbers (known as gematria in which each of the Hebrew letters had numerical equivalents).

To their way of thinking, the number three (3) had special sacred significance, altogether wonderful, magical, and divine. Three symbolizes completeness: beginning, middle, and end. It symbolizes the family bond of father, mother, and child, as well as the wisdom of the stars: sun, moon, and earth. Three stands for the three dimension
of space: height, length, and depth, as well as the
three aspects of time: present, past, and future.
Three is the thrice repeated spiritual song of the
angels in heaven praising the Holy One, Blessed be He: Kadosh, Kadosh, Kadosh or Sanctus,
Sanctus, Sanctus, meaning: Holy in the highest heavens, Holy upon the earth, and Holy forever to
all eternity. (Isa. 6:3).

While Jewish sources do not go beyond
Scriptural requirements needed for the
performance of the commandments with respect
to blowing and hearing the shofar blasts, music
theorists of the Middle Ages speculated on the
occult meanings of proportionality in all aspects,
elements mediaeval Jewish commentators never
considered. The medieval Rhythmic Modes are
an expression of this attitude. Defined by such
terms as ‘perfect’ (perfectio), a threefold unit of
measure (3s, 6s, and 9s), and ‘imperfect,’ a dual
division of measure (2s, and 4s), theorists drew
analogies to musical concepts, such as perfection
and imperfection of rhythmic proportions based
upon Christian theology and the Trinity.

French mathematician and philosopher Jean
de Muris (c.1300-1351) - a friend and supporter of
composer, theorist, ecclesiastic, diplomat, Phillipe
de Vitry (1291-1361), who systematized the use of
both duple and triple meter in mensural notation
- writes, 'All music is founded in perfection,
combining in itself number and sound. The
number which musicians consider perfect is the
ternary number (3). The ternary number multiplied
by itself produces nine (9). In a certain sense the
nine-fold number contains every other, for
beyond nine there is always a return to the unit.'
Once more we find the numerical speculations of
antiquity justified, but this time through a Christian
visor. The Apostle Paul enumerates the spiritual
gifts of God as nine fruits of the Spirit: love, joy,
peace, longsuffering, gentleness, goodness, faith,
meekness, [and] temperance (Gal. 5:22-23).

Since the number nine is the last digit of the
single digit numbers, numerology attributes to it the
significance of completeness, finality or judgment.
In this sense this association further links with the
essence of Rosh Hashanah as 'Judgment Day' or
Yom Hadin, the day on which:
The great shofar will be sounded and a still small
voice will be heard. Angels will hasten, a
trembling and terror will seize them – and they
will say, 'Behold it is the Day of Judgment'
(Unetaneh Tokef prayer, from New Year
liturgy).

But, the number 9, as representative of the
nine months of gestation, before childbirth, also
symbolizes renewal and the rhythm of the life
cycle. Such are some of the speculations surrounds
3s in various combinations: added, multiplied, or
squared.

All of this assumes is that the sounding of
the shofar, in its various arrangements of three-
fold durations and divisions of the beat, somehow
has the power to retune consciousness, drawing
it, away from the everyday and worldly, into other
levels of divine awareness and eternity.

Maimonides writes:

'Even though the sounding of the shofar on
Rosh Hashanah is a biblical commandment,
it has an intimation, as if to say: 'Awake from
your slumber, you who are asleep; wake up from
your deep sleep, you who are fast asleep; search
your deeds and repent; remember your Creator.
Those of you who forget the truth because of
passing vanities, indulging throughout the year
in the useless things that cannot profit you nor
save you, look into your souls, amend your ways
and deeds. Let everyone give up his evil way and
his bad purpose.'

(Mishneh Torah, Rosh Hashanah).

This symbolism, cited again and again, has
become integral to High Holiday liturgy and
constitutes the central symbolism of the shofar, to
this day.

Perhaps, the meaning and symbolism of the
shofar blast is best reflected in a Hassidic tale.
Once, the Baal Shem Tov (1700-1760), founder of
Hassidism, commanded his shofar blower to learn
the secret meanings behind the blasts of the shofar.
The disciple wrote them down on a slip of paper to
look at during the service. But when the time came,
the paper was gone. Broken hearted, weeping bitter
tears, he blew the blasts without concentrating on
their secret meanings. Afterwards the Baal Shem
Tov said, comforting, 'In the palace of the king
are many rooms with different keys for every lock,
but the master key is the broken heart.’ It is more ontology than meaning.

‘There are things,’ says the Lubavitcher Rebbe, ‘that shake us to the core, breaking out in a cry, a scream, or silence. An animal’s horn, not even human is needed to express something so sublime, so essential, and so unbounded that the mind can neither fathom nor hold back.’

The sounding of the shofar is a call to the King of Kings – a call beyond reason. And yet, it is for this very reason that the Torah’s commands are given as statutes, inexplicable biblical decrees to be followed without question: the Lord is king, the Lord was king, the Lord will be king to all eternity (Adonoy melech, Adonoy moloch, Adony yimloch leolam voed) (Prayerbook). The Sages, in their supernal wisdom, attempted to express in sound, number and proportion the crystallized ideation of the Divine. The order of the shofar blasts are in fact mathematical proofs, existential axioms drawn from the well of infinity. Participating in the shofar blasts is a tuning into the limitless and unfathomable. The Memorial Teruah carves out, as it were, an existential place in the infinity of time and space in which to be. It is that section of the Universe in which we live.

**Conclusion: The final call**

The final call of shofar blasts, Tekiah Gedolah is blown at the conclusion of the Day of Atonement:

‘Then shalt thou cause the horn (shofar teruah) of the ‘ jubilee’ to sound on the tenth day of the seventh month, in the day of Atonement shall ye make ‘proclamation’ with the horn throughout your land’.  
(Lev. 25:9)

It is a single, long, drawn-out and sustained blast, signaling the end of the Days of Awe - the departure of the Divine Presence from the worshippers, as the shofar blast once marked God’s departure from Mt. Sinai:

‘when the shofar soundeth long, they shall come up the mount.’  
(Ex. 19:13)

It was sounded, not on the ram’s horn, but on the Yobel, a long, curved, spiraled antelope horn.

Originally this blast on the Yobel shofar took place only once every fifty years, marking the celebration of the Jubilee year, ‘And ye shall hallow the fiftieth year, and proclaim liberty throughout the land unto all the inhabitants thereof’ (Lev. 25:10). Today, because we have lost count of the Jubilee years, we sound this blast every year. After the destruction of the Temple and burning of Jerusalem, all music was prohibited as a sign of mourning for the Sanctuary and the loss of national sovereignty.

Only the blowing of the shofar was permitted. But, by then, this final blast of the large yobel shofar was no longer associated with the Jubilee year and the proclamation of freedom in the land, rather it was connected to the hope of Return and Redemption:

‘And it shall come to pass in that day that a great shofar shall be blown; and they shall come that were lost… and worship the Lord in the holy mountain at Jerusalem’
(Isa. 27:13)

...heralding the advent of the Messiah.
A contemporary work by the author utilizing the shofar in an artistic framework as a reminder of the Prophets, whose voices rang out like Shofar blasts (Amos 3:6).

MAX STERN: Aryeh Shaag for choir, strings, and shofars (2011) http://www.youtube.com/watch?v=Qp0uwzQV0JI

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**Sachs, C.**, The History of Musical Instruments (New York, 1940).


cdo/aid/4837/jewish/Shofar.htm
Sounding the Shofar. www.piney.com/Shofar.html

**Internet resources**

The Process of Making Shofars | Barsheshet Ribak Shofarot Israel.
www.shofarot.com/index.php/the-shofar/theprocess/
http://m.chabad.org/m/article_cdo/aid/89343
Max Stern: Aryeh Shaag for choir, strings, and shofars.
http://www.youtube.com/watch?v=Qp0uwzQV0JI
Shofar-Call to Action.
http://www.chabad.org/holidays/JewishNewYear/template