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**Frame drums – syncretic playing technique and new sonoristic
qualities**

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Introduction

Frame drums are some of the oldest percussion instruments. They have existed in many cultures for centuries, and in some places even for millennia, fulfilling various cultural, social, and ceremonial roles. Their simplicity of design has made these instruments widespread worldwide. Although they are often quite similar to one another, many radically diverse techniques for playing them have developed over the centuries. In many parts of the world, these instruments are played with a mallet, in others they are beaten with various parts of the hand, and in others yet only the finger pads are used; there are great internal differences in each of the aforementioned techniques depending on region. Despite their rich history and tradition, these instruments, apart from a handful of exceptions, have hardly established themselves in the world of European classical music, staying in the domain of folk and ceremonial instruments instead.

My fascination with these instruments began while I was still studying percussion at a secondary-level music school. Through a streak of serendipitous coincidences, I then became a member of an amazing ensemble in Sanok that used instruments from diverse cultures and eras in their compositions. It was in *Matragona* that I first encountered the oriental frame drum. The aural capabilities of this seemingly simple instrument fascinated me. Direct, physical contact with the instrument seemed like something natural and obvious, instead of playing with drumsticks, which I was learning at school at the time. This fascination gave rise to the need to expand my knowledge of instruments and continuously improve my playing skills, which is why I began to attend various workshops, musical meetings, and concerts. I focused on playing instruments from Middle Eastern and North African countries due to the sophistication and subtlety of the techniques used to play them. At first, I familiarized myself with traditional performance and the traditional repertoire played on these instruments. At the same time, I began to take an interest in Polish traditional music with its distinctive rhythm and the way the frame drum is used, therefore it seemed natural to include this type of playing in the artistic work as well.

In time, I noticed that many percussionists, in their search for new means of expression, began to draw on the traditions of disparate, often mutually distant cultures, blending and combining them. This phenomenon has resulted in the creation of a new, syncretic performance technique, drawing from many sources and combining various methods of extracting sound from these instruments. It has influenced not only the way of playing, but also the construction of the drums themselves. The fact that some of the instruments currently being constructed are no longer rooted in one particular musical culture has given rise to a natural need for a new, optimal technique that would allow for the exploitation of their sonic potential to the fullest. This allows these instruments to exist not only in the context of ethnic music – a new playing technique provides sonoristic capabilities that allow for a wider use of these instruments in broadly defined contemporary music.

The artistic piece I have recorded is the product of my many years of experience and artistic explorations. It is the fruit of countless musical encounters with musicians from different countries, representing diverse traditions. The purpose of the piece is to explore and demonstrate the sonic capabilities of frame drums made possible by the use of a new syncretic playing technique. Since my performance career involves mainly instruments from North African and Middle Eastern countries, the emphasis in this paper is placed mostly on them. This also stems from the fact that the new, syncretic performance technique, which is the subject of my research, is manifested to its fullest precisely on this instrumentarium.

Since, after conducting a library query, it turned out that Polish sources concerning the issues addressed in the work are practically non-existent, I had to rely on English-language sources, but also, to a large extent, on the knowledge gained over the course of numerous years of playing frame drums.

I would like to extend special thanks to the people without whom the creation of this work would have been impossible. Prof. Maria Pomianowska, Ph.D. – for her constant support, motivation and scholarly guidance, but also, above all, for the opportunity to participate in her countless artistic projects, which are a source of inexhaustible musical inspiration to me. Maciej Harna – for revealing the universe of ethnic musical instruments to me, already in high school, and showing the multiple dimensions music can have in different cultures. Robert Siwak – for introducing me to the world of frame drums. Justyna Szymańska – for everything.

I. Frame drums

Frame drums are membranophones in which the diameter of the drumhead exceeds the depth of the shell¹. One or two membranes, usually made of leather (although nowadays synthetic membranes are increasingly used), are stretched over a usually wooden shell. Both the type of wood and leather used may vary depending on region, culture, or simply the availability of materials. Their structure seems quite simple, but due to the popularity of these instruments in various cultures and the thousands of years of their existence, a wide variety of these drums has evolved. They differ in size, the type of materials, additional elements that enrich the sound, and in shape. They may also differ in the way they are played, or the role in which they are used. Although this definition seems rather obvious, it may already raise some doubts at the outset, for according to it, snare drums, including the piccolo snare, could be classified as frame drums. In terms of the structure itself, this would be justified, however the matter becomes more nuanced when history and playing methods are taken into account. Therefore, in addition to the shape of the instrument itself, it seems appropriate to factor in other aspects as well. One of these is performance technique. The musician plays on the frame drums discussed in this work using their hands and fingers, or a mallet held in one hand. The instrument is held by the performer and there is no need to place it on a stand.

While frame drums are rather uncomplicated in terms of construction, the question of nomenclature may pose a major problem. In the case of orchestral instruments, it is sufficient to use an Italian term, which is understandable and definite to most audiences around the world. Among the few representatives of the frame drum group that meet this criterion is the tambourine, also referred to as in scores as the Basque drum (It. *tamburino*, *tamburello basco*, abbrev. *tmbno*, *tmb. basco*). However, even here the name turns out to be questionable, as it turns out that the instrument has no Basque provenance². To further complicate matters, many similar instruments can have completely different names, depending on the country or culture they hail from³, and vice versa – one name can refer to completely different drums, or even instruments of disparate types in general⁴. An additional problem for instruments found in countries where the Latin alphabet is not in use and which lack names in languages other than the original is transliteration. Sources often provide numerous variants of names that refer to the same instrument. To make things even more confusing, an etymological analysis of certain names shows that they often refer in a very general way to various properties, such as the shape of the instrument⁵, or simply just denote a drum. For the purposes of this work, I have decided to employ names in the variants most commonly used by Polish percussionists playing these instruments, as well as those frequently found in the international literature on the subject.

¹ Sachs C. *Historia instrumentów muzycznych*, Polskie Wydawnictwo Muzyczne, 1989, pp. 19, 435.

² Sachs C. op. cit., p. 267.

³ E.g., the drum functioning in Iran under the name of *dayereh* is called *ghaval* in Azerbaijan.

⁴ The *tar* in North African countries is a type of frame drum, while in Iran the same name refers to an instrument which is a kind of lute.

⁵ The name *dayereh* in Farsi simply means a circle in addition to being an instrument name.

1. Historical overview

Frame drums are some of the oldest instruments known to man. Who and when came up with the idea of stretching leather over a wooden frame to make sound is, unfortunately, unknown. It can be speculated that the instrument originated from a sieve. The Sumerian word for *drum* – *adapa* – can be in fact translated as *sieve*⁶. In medieval Europe the Spanish *pandero* could denote a drum, but also a leather tray⁷. In Polish folk music the frame drum *jest* sometimes referred to as a *przetak*⁸. When did, therefore, the tool transform into an instrument? The oldest currently known source documenting the existence of the frame drum is a wall painting from a temple in Çatalhöyük (present-day Turkey), dated to c. 5800-5600 BC, and depicting a group of people, who are probably dancing and playing instruments.



Figure 1: Painting from Çatalhöyük temple, image source: <https://i2.wp.com/www.wehikuldzwieku.pl/wp-content/uploads/2018/02/5600-ac.jpg>

It seems that the frame drum can be found among the instruments. While in this case there might be some uncertainty as to the nature of the object held by the figure, later findings leave no doubt. It is known that frame drums were used in ceremonies in honor of the goddess Ishtar⁹. The first person known by name to play the frame drum was a priestess of the Sumerian lunar deity Nanna – Lipuš-ia'um (*Lipushiau*)¹⁰ – granddaughter of the ruler of the Akkadian Empire – Naram-Sin – who lived in the ancient city of UR (c. 2300 BC).

In ancient times, frame drums belonged to the domain of women. Unearthed materials suggest that drums were played mainly by priestesses or temple prostitutes.

⁶ M. Molina, *Frame Drums in the Medieval Iberian Peninsula*, New York 2006, p. 3.

⁷ Ibid.

⁸ A type of large, round sieve.

⁹ *Ishtar (Inanna, Issar)* – goddess of war and love in Mesopotamian mythology.

¹⁰ L. Redmond, *When the Drummers Were Women*, New York 1997, p. 73.



Figure 2: Terracotta relief, Mesopotamia, c. 1950-1530 BC, Paris, Louvre. A couple playing instruments during intercourse – probably a representation of ritual intercourse with a temple prostitute, image source: <https://i1.wp.com/www.wehikuldzwieku.pl/wp-content/uploads/2018/02/Luwr-AO-16924.jpg>

The important role of female drummers can also be observed in the art of ancient Egypt. They are mainly associated with the worship of the goddess of the heavens – Hathor – who was also was the patroness of women, family and motherhood, champion of dance and music, as well as the goddess of love, joy and beauty. Representations of this goddess and her priestesses playing frame drums can be found in temples dedicated to her in Edfu and Dendera.



Figure 3: Seven Hathor figures playing on frame drums and sistra. Temple of Hathor in Dendera, image source: <https://ma91c1an.files.wordpress.com/2014/11/the-seven-hathors.jpg>

The frame drum is mentioned numerous times in the Old Testament¹¹. In Hebrew it is known as *tof*. Researchers agree that the name referred to some kind of frame drum held in one hand. In translations of the Bible into Polish, the name is often translated simply as a drum, which makes it considerably more difficult to assess the specific type of instrument: “Miriam prorokini, siostra Aarona, wzięła bębenek do ręki, a wszystkie kobiety szły za nią w płasach i uderzały w bębenki” (Ex. 15:20)¹². In the earliest translations of the Old Testament into Greek and Latin, the Hebrew *tof* was translated as *tympanon* and *tympanum*, respectively. In ancient Greece the *tympanon* was

¹¹ Molina M., op. cit., p. 51-52.

¹² *Pismo Święte Starego i Nowego Testamentu*, Wydawnictwo Pallotinum, Poznań – Warszawa, 1990, transl. ks. Stanisław Łach.

closely tied to the cult of Dionysus – mythical god of wine, fertility and wilderness.

This tradition soon made its way to ancient Rome, where *tympanum* frame drums served as an attribute of the fertility goddess Cybele.

The presence of these instruments in the Iberian Peninsula can be traced to the Moors, who conquered the territories of present-day Spain and Portugal in the 8th century, and ruled over them for centuries to come.

With the advent of Christianity in Europe, the prominence of frame drums drastically declined – perceived as pagan instruments, they were even banned. The role of women as drummers also declined. The Synod of Mar Ezekiel in 576 banned Christians from permitting their daughters to learn secular music¹³.

Fortunately, these instruments did not disappear from European history forever, and began to reappear in iconography in the 14th century in depictions of heavenly music¹⁴.

With the arrival of the Age of Discovery, frame drums found their way with Spanish and Portuguese colonizers to South America, where they remain popular to this day (e.g., the Brazilian *pandeiro*).

Shaman drums constitute a separate line of evolution of frame drums¹⁵. They are distinctive to Siberian peoples, the Saami inhabitants of Northern Europe, and also found among the indigenous peoples of North America. Of course, they have their own names, but due to their similar construction and association with shamanism, they often function under this collective name in the literature.

Frame drums are constantly a very important part of the cultures of Middle Eastern and North African countries. They are also present in the traditional music of European countries, such as in Italy (*tamburello*, *tammorra*), Spain (*pandereta*), Portugal (*adufe*), or Ireland (*bodhran*). Our part of Europe also has its own variants of these instruments (the Polish frame drum, the Ukrainian *buben*). The tradition of playing is still well alive in Asia, South America, and North America. However, there is clearly a new wave of interest in frame drums and playing them in a way that is no longer associated solely with traditional music. The evolution of these instruments has not come to a halt, and in spite of over seven millennia of their documented history, it seems that they still have unknown capabilities waiting to be discovered.

¹³ J. Quasten, *Music and Worship in Pagan and Christian Antiquity*, National Association of Pastoral Musicians, Waszyngton, 1983, p. 83.

¹⁴ Redmond L., *A Short History of the Frame Drum*, *Percussive Notes* 34, no. 5, 1996, p. 72.

¹⁵ Sachs C., op. cit., p. 19.

II. Construction of frame drums and its influence on sound properties

The aural capabilities of an instrument are a product of several factors – the way the sound is emitted, but also the construction of the instrument itself, its size, and the type of materials used.

1. Drumhead

The most important structural element affecting the sound of a drum is the drumhead, which, when stimulated to vibrate, is its source. It is most often made of properly tanned animal skin¹⁶. Historically, the type of leather largely depended on the availability of the material where the drum originated. At present, due to ease of transportation and broadly defined globalization, this is no longer a determining factor. Instead, the properties of the material are such a factor. In the case of natural membranes, the species of the animal and the treatment of the leather is very important for the sonic qualities of the instrument. Currently, calfskin and goatskin are most commonly used. They allow for an excellent sound, are durable and can be treated in different ways, thus allowing to adjust the sound properties of the instrument as needed. Instruments with camel skin or sheepskin are also encountered. On smaller drums (such as the *riq*), membranes made of fish skin are traditionally used. It is very thin and quite sturdy, enabling it to be tensely stretched, which, in the case of the *riq*, is crucial for producing the correct sound. Traditional Polish frame drums sometimes used dog skin (which supposedly held the tuning well). The Indian *kanjira*, in turn, has a membrane made of lizard skin¹⁷. Shaman drums often have membranes made of deerskin.

Apart from the animal's species, the manner in which the skin is treated to create a membrane is extremely important. Membranes, with a few exceptions¹⁸, are devoid of bristle – left on the membrane, it would dampen it, shortening the decay and muffling the aliquots. Another important parameter is the thickness of the leather. Drums with a thicker membrane have a darker, more muffled sound. They don't have as many aliquots, and their decay is noticeably shorter. The membrane itself is sturdier, which is why this type of instrument is often played with some type of mallet¹⁹. A thinner membrane provides a sound more saturated in aliquots, and with a longer decay, which allows the drum to produce a wider and more varied palette of sounds. A thin membrane is also more fragile and requires the use of more subtle playing techniques, which is why such instruments are often played not even with hands, but with single fingers.

The number of membranes is of no small importance for the sound of the instrument. At present, the vast majority of frame drums have a single head, however instruments with membranes on both sides of the shell²⁰. This radically alters the acoustic properties of the drum. The vibrating air is

¹⁶ In order to be suitable for a membrane, leather must undergo a tanning process. Its purpose is to protect it from rot, and to grant it with appropriate softness and elasticity.

¹⁷ Most often the skin of a *Bengal monitor*.

¹⁸ Bristled membranes are occasionally used in shaman drums.

¹⁹ This is the case, e.g., with the Polish frame drum, bodhran, or shaman drums.

²⁰ This is the case, e.g., with the Portuguese *adufe*.

trapped, so to speak, between the membranes, so the vibration of one drumhead is transmitted to the other. Since it is virtually impossible to perfectly align them, each will have different component tones. Consequently, the pitch is much less defined than in the case of single membrane drums.

A common feature of instruments with natural leather drumheads is their sensitivity to changes in atmospheric conditions. Cool air and, most of all, moisture, cause the membrane to stretch, which leads to a noticeable lowering of the drum's sound. While a loose membrane is desirable in the case of a *kanjira*²¹, this can be a problem for other drums. Most instruments made in Middle Eastern and North African countries are adapted to dry and hot climates. In Poland, for a significant part of the year, they need to be prepared for playing by preheating them²². By analogy, if the air is too dry²³, the membrane should be gently moistened with water. Another method of dealing with this problem is the implementation of mechanisms for changing the tension of the head²⁴.

Currently, a large number of instruments are equipped with membranes made of synthetic materials, which is insensitive to changes in weather conditions. Such membranes have many advantages, such as the aforementioned resistance to the whims of the weather, and ecological considerations (they do not require killing an animal), however they are still inferior in sound to their natural counterparts. Paradoxically, this may be due to their perfections. Natural membranes are obviously unique – their thickness, even with careful tanning, will never be exactly the same at every point. Sometimes, the leather has certain defects. All of this means that each drum will sound different. This might seem like a disadvantage, but it turns out that such imperfections are closer to human nature, and most musicians for whom the sound of the instrument is a priority will choose a drum with a natural head²⁵. Drumhead manufacturers, however, are constantly working on perfecting the imitation of leather, so there is a chance that this gap will be increasingly bridged. Remo is leading the way with its *Fiberskyn* membranes. In some instruments that require particularly strong tension and a thin membrane (like the aforementioned *riq*), synthetic heads already seem to dominate the market. Practical considerations prevail here, since in the case of *riqs* with natural membranes, professional performers often had to have at least two instruments on them. While one was played on, the other remained placed next to a heat source, so that it could replace the former once it had lost its sonic qualities due to atmospheric conditions. In the case of the *kanjira*, purchasing an instrument with lizard skin may not be possible in Europe or America due to regulations pertaining to the transportation of goods produced from endangered animal species. A synthetic drumhead is therefore a satisfactory alternative in this case.

²¹ For a discussion of the specifics of playing this instrument, see Chapter IV, section 3.

²² Various types of electrically heated cushions can be used; preheating with a stage light also works well (provided it is not LED-based).

²³ In Poland, such a situation often occurs during the heating season, when radiators effectively dry out the air in apartments.

²⁴ For a discussion of these, see Chapter II, section 4.

²⁵ This is my repeated observation and the result of numerous musical encounters and discussions with drummers from around the world.

2. Frame

The second basic structural element of a frame drum is the frame in question. Its size, shape, as well as the type of material from which it is made, have a significant impact on the instrument's sound. These drums do not have a resonator as such, but the vibrations coming from the vibrating membrane are also transferred back to it, which allows it to act as a resonator, enhancing and prolonging the decay.

First and foremost, however, the effect that the frame has on the sound of the instrument is due to its size. The diameter of the frame directly translates into the vibrating surface of the membrane, and therefore the pitch of the sound produced by the drum. The larger the diameter, the lower the sound that can be expected. This is, of course, also the result of the membrane's tension. By analogy, instruments with a smaller diameter are expected to produce higher sounds.

In drums with a single membrane, the depth of the frame alone does not seem to have too significant an impact on the sound of the instrument. Only in combination with the thickness and density of the material from which it is made does this factor begin to significantly affect resonance, which in turn translates into timbre. In the case of drums with two membranes, depth is an important parameter determining the amount of air "trapped" between the drumheads, which also determines the character of the sound.

2.1 Shape

The shape of the frame is significant for the sound quality. The vibrations of a single membrane stretched over a round frame are more harmonic, which translates into a more clearly defined pitch. With other shapes, the vibrations of the drumhead are more complex; there are more non-harmonic components, due to which such instruments have a less explicitly defined pitch. Examples of non-circular drums include the square-shaped Portuguese *adufe*, or the octagonal Chinese *baffangu*.

2.2 Type of material

In the vast majority of cases, the frame is made of wood, although metal frames also occur (especially in small drums such as the *riq*). Currently, synthetic frames are also increasingly more common. Wooden frames are usually made of a single bent panel (sometimes a panel is made of several layers of plywood). To make such a bend possible, the panel is initially subjected to a special steam, water or heat bath, which allows the wood to become temporarily flexible. Without this, the wood could break during bending. After being bent into a circular shape, the panel's overlapping ends are glued together, yielding the actual frame. Panels made from hardwood such as ash, oak or walnut are especially suitable for this purpose, as they are characterized by a fairly high density and hardness, while being flexible enough to undergo such a process.

In the case of square or otherwise polygonal-shaped drums, bending is not necessary, since the

frame can be made from a sufficient quantity of straight panels attached to one another.

It is also possible to come across drums with a round frame made from a number of straight panels of wood glued together to form a polygon, and subsequently sanded down to a circular shape²⁶. An example would be the cheaper pieces of the Uzbek *doira*, with a frame glued together from several pieces of wood²⁷.

Sometimes, especially in the case of smaller instruments such as the *kanjira*, the frame is made from a single hollowed-out section of a tree trunk.

3. Additional sound enriching elements

In addition to the drumhead and the frame, many instruments possess additional elements that affect the sound of the drum.

3.1 Jingles

Based on existing sources, it can be assumed that the first frame drums had no additional components than the frame and drumhead. Drums and various types of rattles existed however in parallel, often interacting with one another. Evidence of this can be seen in figure 3 in the previous chapter. The *sistrum* seen in it is precisely a rattle with metal plates. The first instruments enriched with this type of metal plates²⁸ can be found only around the 2nd century AD in southern Italy²⁹. Nowadays, it seems that most of the traditional drums found in various cultures are equipped with such elements. Among the drums present in Europe, it would probably be easier to name those that do not have rattles (the Irish *bodhran*, or the shaman drums from the north of the continent).

Interestingly, a drum with such metal rattles could be described as a hybrid instrument within the classification of instruments based on the source of vibration that produces sound. This is because jingles are idiophones and the drum is obviously a membranophone. The jingles are installed in special openings in the frame, through a hole drilled in their center. In practice, always two are strung on one rod, so that they can strike against one another.

Jingles can be used in a variety of ways. They can be stimulated to play independently of the drumhead by the movement of the entire drum, or by striking the frame, or by vibrations transmitted to them when the membrane is struck or rubbed. A particular example of utilizing the metal jingles is provided by the Arab *riq*, which has five pairs of usually brass round plates. They can be treated as an independent instrument, which can be played with one's finger pads³⁰, which, combined with disparate types of membrane strikes and additional methods of shaking the instrument, makes it one

²⁶ This method is used by a Polish manufacturer of frame drums – Jacek Żelazek.

²⁷ This is due to the fact that in the *doira* the frame can be even a few centimeters thick and bending it is a difficult and time-consuming process, which makes drums with a rim made of a single piece of wood more expensive.

²⁸ Mostly brass.

²⁹ Robinson, N. Scott, *Performing the Past, Present and Beyond: Glen Velez and Researching Frame Drum History*, *Percussive Notes* 51, no. 4, 2013.

³⁰ For a more detailed description, see Chapter III, section 2.

of the most difficult drums of its kind.

In many drums, such as the Polish folk frame drum, it is common to find small bells additionally attached to the instrument. Both jingles and bells are brought to play by striking the frame of the membrane's rim with the base of the hand, as well as by shaking the instrument.

3.2 Strings

An interesting form of modifying the sound of the instrument is the installation of strings adjacent to the membrane. They act analogously to the wires in a snare drum, enriching the sound of the drum with a distinctive buzz. An example of a frame drum with such a modification is the *bendir*, popular in North African countries (especially Morocco and Tunisia), which usually has two or three strings stretched under the membrane. Originally, they were made of intestines, however nowadays it is more common to find them made out of nylon. Here it would be rather inappropriate to speak of a hybrid nature of the sound, since the strings are not meant to vibrate freely as in chordophones, but simply have to bounce against the membrane as a result of its vibrations, producing a distinct buzzing hum. They impart a sharpness and roughness to the sound, while limiting the decay and dulling the definiteness of the drum's pitch.

3.3 Metal rings

Metal rings suspended under the drumhead on the inside of the frame can be treated as a separate category of additional elements. An example of such an instrument is the *daf*, popular in Iran. It is a rather large drum with a diameter usually exceeding 50 cm. Due to the unique technique of playing it, it must be relatively light compared to its size, hence the small frame depth (c. 6-7 cm). The instrument is held with the left hand, and the drumhead is struck with the fingers of both hands. The uniqueness of this instrument is defined by the dozens of small metal ringlets attached to its frame, which are connected into short chains. These can be used in a variety of ways. When the instrument is shaken, they can strike both each other, as well as the back of the membrane. The instrument can be also tilted so that the rings constantly lie on the membrane and bounce when it is hit, or in a way that they do not come into contact with it, making the sound of the drum clear. All of this allows the instrument to have a very wide range of sonic capabilities. The *daf* is very popular among Iranian Kurds and often used in Sufistic ceremonies. Another instrument with similar ringlets is the Iranian *dayreh* (known in Azerbaijan as the *ghaval*). In this case, the rings are solitary and do not form links. They also do not touch the membrane, so their influence of the sound of the drum is not as pronounced as in the case of the *daf*. When the instrument is moved, they can however strike the interior of the frame, adding a rattling, metallic hum. In the Uzbek version of this instrument (the *doira*), both the frame, and the metal rings are much more massive. They are also mounted close enough to collide with each other, making the metallic rattle even more intense.



Figure 4: Uzbek doira, auth. Wojciech Lubertowicz

3.4 Pellets

Another example of frame drum modification is the *geophone* invented by Olivier Messiaen. The instrument was specially constructed for the piece *Des canyons aux étoiles*.... The interior of this two-membrane drum contained lead pellets. When the horizontally-positioned drumhead was gently tilted, the pellets rolled over it, producing sounds intended to imitate shifting sands. Similar instruments now function under the name of *ocean drum*, and their sound is indeed somewhat reminiscent of the rush of sea waves (when the pellets are gently rolled over the membrane). Some musicians, however, play the drum vertically, in a manner similar to playing the *daf*, or in a *free hand* position³¹. Instruments of this type have been classified by Curt Sachs as rattle drums³².

4. Tuning mechanisms

In most traditional drums, the membrane is permanently attached to the frame. It can be glued to it, or nailed with pins (as in the tambourine). A drumhead fixed in this way can no longer be tuned mechanically³³, which is why modern instruments often utilize various tuning systems.

4.1 Rods inside of the frame

One such system, widely used today, involves dividing the frame into two parts. The upper part, located directly under the drumhead, is attached to the lower part by several equally spaced rods. The rods can be screwed inside or outside, thus changing the distance between the frame parts. The drumhead is permanently attached only to the lower part, therefore the increase in distance between both parts of the shell increases membrane tension. By analogy, decreasing it loosens the membrane, and this lowers its pitch. The disadvantage of such a system is the difficulty of maintaining an equal distance between both parts around the entire perimeter of the drum. This leads to uneven membrane tension, which in turn results in the deterioration of aural properties and blurring of the drum's recognizable pitch. The use of metal rods and threads also increases

³¹ See Chapter IV, section 2.2.

³² Sachs, C., op. cit., p. 437.

³³ In the case of leather membranes, one might use the methods described in Chapter II, section 1.

instrument mass, reducing playing comfort when the instrument is held in hand.

4.2 Rods on the outside of the frame

Another variant of this method is one used in many modern drums, such as snare drums and toms. The membrane has a narrow, usually metal rim built into its edges, with a diameter slightly larger than the drum frame. A metal flange is put on it, which is tightened by bolts fixed to the shell of the instrument. Polish folk frame drums, for example, are tuned this way. Due to a large number of metal elements, this system substantially increases instrument mass and is most often used in relatively small drums.

4.3 Rope tension

In shaman drums in which the membrane is attached to the frame by cross-stringing on the back of the instrument, pitch change can be achieved by weaving in an additional rope and tightening or loosening the ties on the braid. In this case, the membrane is not glued or nailed to the frame permanently, so it can shift over it, allowing for tension adjustment.

4.4 Pneumatic system

The newest, and probably most interesting tuning system, is the pneumatic system invented by the David Roman Drums company. It involves inserting an elastic tube with a bicycle tire valve between the frame and the membrane. Thanks to this solution, the membrane can be quickly and evenly tightened using an ordinary bicycle pump. Loosening the membrane is even easier, as it only requires releasing the air by pressing the valve. This makes it possible to repeatedly tune the instrument during a concert, or even over the course of a single song. This solution has already been copied by many manufacturers and is appreciated by musicians. David Roman Drums are used, among others, by Zohar Fresco³⁴.

³⁴ Prominent Israeli drummer of Turkish descent, specializing in playing frame drums. Collaborator of Leszek Możdżer, among others.

III. Traditional techniques of playing selected frame drums

Traditional playing technique can be understood as a way of producing sound from an instrument belonging to a particular culture, which is the result of a tradition developed over generations and often passed down orally. It is not a coherent system and there is no such thing as a single traditional playing technique. Every instrument would thus have to be considered separately in this aspect, and even then, it would turn out that for a single type of drum there may be many styles and variants of playing technique, depending, for example, on region³⁵. Tradition itself is also not unchangeable, but constantly evolving. Every aspect now considered traditional, and thus implicitly “perennial” or “unchanging”, must have once been a novelty that for some reason stood the test of time and garnered wider popularity. It is therefore possible that the modern syncretic technique of playing frame drums described in this work will be one day perceived as traditional.

In this multitude of traditions, however, certain recurring common features, such as the way the drum is held, can be noted. Frame drums, as a general rule, are traditionally held with one hand (for right-handed people, it is the left hand). In the case of single membrane drums, two basic variants of this grip can be seen both in iconography, and in the traditions existing today³⁶:

- **One hand under** – the drum is held from underneath with the left hand. The membrane, situated almost vertically, faces outward from the musician. The thumb is positioned on the frame on the inside of the membrane. The remaining fingers of the left hand can be lightly touching the membrane. This grip is sometimes called the “oriental grip”, while in English-language literature it is also known as *upright style*.
- **With the thumb on the drumhead** – the drum is held with the left hand with the thumb on the outside of the membrane, and the rest of the fingers gripping the frame. The front of the membrane faces the musician. In this grip, the left hand cannot in any way strike the membrane, but it can move the instrument quite efficiently, which is why this variant is sometimes used for drums with additional rattles (e.g., the orchestral tambourine, or the Brazilian *pandeiro*). This grip is sometimes referred to as the “European grip”.

³⁵ An example of this can be found in the south of Italy, where there are simultaneously many traditional variations of playing the *tamburello*, a traditional Italian frame drum used to play tarantella.

³⁶ Robinson, N. Scott, *Performing the Past, Present and Beyond: Glen Velez and Researching Frame Drum History*, *Percussive Notes* 51, no. 4, 2013.



Figure 5: One hand under position (upright style), auth. Wojciech Lubertowicz

On frame drums, as well as goblet drums, which originated in Arab culture, basic sounds produced by the instruments have common, onomatopoeic names. They are currently widely used among musicians playing the new syncretic technique. The names do not specify the manner in which a particular sound is to be emitted, only its properties. They are as follows:

- Dum (*doum, tom*) – the lowest sound a given drum can produce. Dum is an open tone, i.e., the membrane must vibrate freely, and the time of contact between the hand and the drumhead must be as short as possible, so that the resulting sound is not dampened in any way. It is performed with the right hand.
- Tek (*tak, ta*) – a high, sharp sound, obtained by striking the edge of the membrane with the right hand. Tek is also an open sound.
- Ka – also a sound produced by striking the edge of the membrane. It is similar to the tek, however it is done with the left hand. It is usually not accented and its tone is softer.
- Pa (*pe*) – a closed sound, the hand stays on the membrane after striking it, dampening its vibrations. On frame drums it is usually not accented. It is shorter, but quite soft.

Below is a figure demonstrating the finger numbering scheme used in this work.

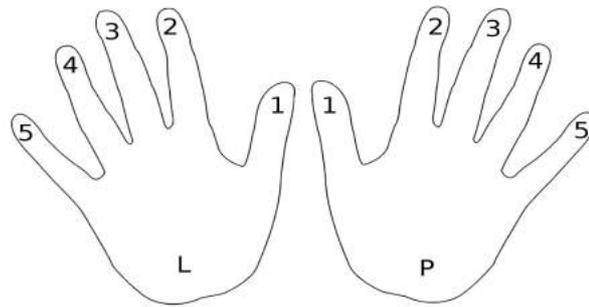


Figure 6: Finger numbering scheme

1. Bendir/tar

The *bendir* and *tar* are played similarly, therefore they may be described jointly.

The drum is held with the left hand with an underhand grip. The instrument's weight rests mostly on the hand holding it, which is why these instruments are usually not very large. The thumb of the right hand touches the side of the frame, stabilizing the instrument and bearing some of the weight. The left hand is not placed exactly under the drum. Assuming that the membrane is a clock face, the hands are placed approximately in a 5:40 position. The drum is tilted slightly forward. The grip of the left hand should be as light as possible, so as to minimize muscle tension. The weight essentially rests on the base of the index finger, and the thumb stabilizes the instrument from the interior of the frame. The basic strikes are made with the right hand, but the fingers of the left hand can also beat the membrane.

- Dum – made with the fourth finger of the right hand. The strike is led with a rotary motion of the forearm, and the thumb resting on the frame is the axis of rotation. The pad of the straight but untensed finger strikes between the center and the rim of the membrane (the exact location depends on instrument size and membrane type).
- Tek – also made with the fourth finger. The pad of the straight finger strikes the edge of the membrane, so as to produce a high-sounding, fairly sharp tone. The beat is generally not dampened, but if the finger remains on the rim, it should not significantly affect the sound, as membrane vibrations are not particularly pronounced at this location anyway. As with the *dum* sound, the finger is powered by the rotational movement of the forearm, with the thumb as the axis of rotation. A slight elevation of the elbow is thus necessary for the finger to reach the edge of the instrument.
- Ka – made with the pad of the fourth finger of the left hand. Since the hand holds the instrument and its mobility is limited, the movement is dependent on a greater involvement

of finger flexor muscles (the remaining fingers, except the thumb and index finger, also perform the movement, but only the ring finger hits the edge of the membrane). The strike is therefore weaker than the analogously performed *tek*. If this sound needs to be accentuated, more weight can be temporarily shifted to the thumb of the right hand, temporarily relieving the left hand and allowing more energy to be added via rotary motion.

- Pa – can be made with either the right or left hand. In the case of the right hand, the strike is done using the pads of slightly spread fingers (2-5), with the thumb resting against the side of the frame at all times. The fingers remain on the membrane after the strike to dampen its further vibration. The pads do not have to strike exactly at the same moment, which causes the sound to acquire a certain softness and slightly “brushy” quality. The pa is made quite far from the membrane’s edge; however, it is also important not to hit the very center of the drum. With the left hand, the sound is produced by hitting the fingers (2-5) as far into the membrane as possible, with the entire length of the fingers (the first joints are thus placed on the frame’s rim). This sound is slightly different from that which is produced with the right hand, and therefore is not used too often.

2. Riq

This small, unassuming frame drum turns out to be quite a complicated instrument. There are two ways of holding it:

Cabaret (open) position – the instrument is held vertically with an underhand grip, and its entire weight rests on the left hand. It is held so that one of the five symmetrically spaced groups of jingles in the frame is at the top. The right hand touches the instrument only when striking the membrane or jingles. The left hand does not strike the membrane, but can play the jingles. This is done by the pads of bent fingers (3-4). Additionally, the thumb resting on the inside of the frame touches the jingles, controlling their sound. The left hand is also responsible for moving the instrument for additional stimulation of the rattles.

- Dum – made with the straightened index finger of the right hand, close to the center of the membrane (but not at the center itself). The strike is done by the entire length of the finger. After striking, the finger should immediately bounce off the membrane.
- Tek – made by striking the pad of the fourth finger against the edge of the membrane, in a similar manner to that of the *tar* and *bendir*.
- Ka – not made in this position.
- Pa – made with the joined finger pads (2-5) of the right hand. The hand strikes the area in the center of the membrane. This sound is slightly more aggressive than on other frame drums. The beat is dampened, but due to strong tension and small size of the drumhead, the finger pads do not have to “stick” to it for long to stop the vibration.

Although the *riq* has five double pairs of brass cymbals, only the pair at the bottom of the instrument, controlled by the thumb of the left hand, is directly played on.

The left hand can also move the instrument by making a rotating motion with the wrist, so that the pair of cymbals at the top of the drum serves as the axis of rotation, causing the rest of the sets of cymbals to start hitting the frame and each other, resonating loudly.



Figure 7: *Riq* held in cabaret position, view of cymbal controlling thumb, auth. Wojciech Lubertowicz

The soft (muted) position – the instrument is held symmetrically in both hands, so that the drumhead rests on straightened index fingers. The instrument is therefore tilted forward, so that the cymbals, lying on each other and held down by their weight, have much less room to move. However, they are still sensitive enough to vibration that they add a short, bright hum when the membrane is struck.

- Dum – in this position it can be made by both hands, but using the right hand is customary. The strike is performed with the fourth finger (the principle is similar to that of the *bendir*). For the sound to resonate properly, the index fingers resting on the drumhead must be shortly bent at the moment of the strike, so that the membrane can vibrate freely (the instrument then rests with its edge on the base of these fingers). Due to strong membrane tension, the sound is quite short, so the index fingers can quickly return to their resting position.
- Tek – in this position *tek* is a muted sound (due to the index fingers resting on the membrane), and made by the pad of the fourth finger of the right hand. In its nature, it may somewhat resemble the sound of a *rimclick*³⁷ on a snare drum, and distinctly differs from the *tek* played in the cabaret position. The sound is short, dry, and is accompanied by a short clink of the jingles.

³⁷ A type of beat on the snare drum frame with the tip of the drumstick adjacent to the membrane and simultaneous dampening of the membrane by the hand holding the drumstick.

- Ka – does not differ from *tek* in this position.
- Pa – not made in this position.

No separate beats are made on the jingles in the soft position; however, one may tilt the *riq* with a sudden movement and immediately return to the starting position, causing two loud and short clinks. In addition to the basic tones, various types of tremolos and flourishes can be played with fingers 2-4 of both hands. The beats then are performed with the force of finger flexor muscles.



Figure 8: *Riq held in soft position, auth. Wojciech Lubertowicz*

3. Kanjira

The left hand holds the instrument from underneath with the thumb on the inside of the frame. The remaining fingers touch the membrane near the rim on the exterior. The left hand does not beat the membrane, but changes its tension by pressing and releasing it, allowing the distinctive glissando sound to be produced. The membrane must be quite loose, and tighten only when pressed by the fingers of the left hand, to enable the resonant tone.

An open tone can be produced with the right hand by striking the membrane with the straightened index finger (similar to the open position on the *riq*). It is precisely this open tone that can be modulated with the fingers of the left hand.

Muted beats are performed in an interesting way – the fingers of the right hand are divided into two groups. The first is the thumb with the index finger, the second the remaining fingers. Thanks to the rotary movement of the wrist, the hand works like two separate sticks, allowing the playing of very fast rhythmic realizations (the hand, after hitting with the first group of fingers, is almost immediately ready to hit with the second group). Strikes are made with the finger pads, which stay on the membrane after contact, to dampen its vibrations³⁸.

³⁸ This is precisely the *split hand* technique discussed in Chapter V.

4. Polish frame drum

This instrument is traditionally played with a single wooden mallet, often wrapped in cloth or leather at the end. It is held from underneath in the left hand, which does not perform any beats, but can move the drum to activate the cymbals attached to the drum. Some versions of the instrument have a handle fixed to the interior of the frame. The drummer holds a rather short mallet in their right hand. The beats made with it are open and bass-like (reminiscent of the *dum* sound). In addition to striking with the mallet, the musician also strikes the rim of the membrane with the base of their hand, thus stimulating the metal jingles, which produce a bright, metallic, jangling sound. Striking with the mallet and base of the hand simultaneously is also possible.

IV. Syncretic technique of playing

Syncretic frame drum playing technique can be understood as a contemporary method of achieving the broadest possible range of sonic and articulation capabilities from the instrument, detached from the cultural context and historical trappings associated with it. It draws inspiration and adapts techniques from various percussion instruments, adapting them to the particularities of frame drums. Its basic tenets are ergonomics and sonic capabilities. This phenomenon can be treated as a certain result of globalization. The emergence of the internet and social media has further accelerated it and facilitated its diffusion. Interested people can easily and costlessly access recordings and videos where they can see various ways of using instruments, listen to the musical context they exist in, and what rhythms are played on them. With a little commitment, they have the possibility to listen to virtually any instrument. Social media has significantly facilitated the emergence of an international community of musicians interested in playing frame drums³⁹. Within this community there is an active exchange of experiences, knowledge, and ideas, which allows the continuous development of this branch of percussion art. The result of the formation of the syncretic technique was also a change in the role of frame drums also in those countries, in which these instruments are a part of living tradition, as they were previously not treated as solo instruments – only under the influence of a style of playing detached from tradition (or, more precisely, based on multiple traditions) did they become such⁴⁰.

1. Origins

Glen Velez can be considered the precursor of the syncretic technique. Velez, an American percussionist of Mexican descent, born in Dallas in 1949, and winner of four Grammy awards, revolutionized the approach to frame drums. As written by N. Scott Robinson: “Glen Velez’s work in unifying frame drum techniques in contemporary musical contexts that feature complex compositions and virtuoso improvisation inspired a global movement in the development of a postmodern meta-frame drumming culture”⁴¹. He began his drumming adventure with a drumming set, before continuing his studies on classical percussion instruments. In the 1970s he took up playing the South Indian *kanjira*, later the Arab *riq*, Italian *tamburello*, Irish *bodhran* and other frame drums. Initially, this did not yet herald the start of a global revolution. “At first, they [the drums – our note] were isolated. I was playing *kanjira*, and I didn't think about playing a *kanjira* thing on the *riqq*, I wouldn't have even thought of that. Because the *riqq* you play a certain way, and a *kanjira* you play a certain way”⁴². It was only through his entry into the community of

³⁹ One example is one of the many groups of frame drum enthusiasts, <https://www.facebook.com/groups/FrameDrumming>.

⁴⁰ J.E. Nicholson, *Selected works for solo frame drums by B. Michael Williams*, University of North Texas, 2009, p. 10.

⁴¹ N. Scott Robinson, *Performing the Past, Present and Beyond: Glen Velez and Researching Frame Drum History*, *Percussive Notes* 51, no. 4, 2013, p. 30.

⁴² Interview with Glen Velez, N. Scott Robinson, *Glen Velez: A World of Sound in His Hands*, *Modern Drummer* 24, nr. 4, 2000, p. 79.

musical improvisers, with Charlie Morrow at the forefront, that Velez's approach to his way of playing changed. "He [Charlie Morrow – our note] had set up little communities of improvisers. That was a very good situation for me, because there were no judgements going on. No one was saying, 'Hey, you're playing South Indian style on a North African tar drum. That's not right!' So there was a lot of freedom. I had all this technical information about the way to play these drums, and here was a situation where I could use that information any way I wanted. It was all about discovery"⁴³. Both Velez's artistic and, perhaps more importantly, educational and organizational activities laid the foundations for the contemporary approach to frame drums. In 1989, John Cage composed the "Composed Improvisation No. 3 for One-sided Drums With or Without Jangles" for him. In collaboration with Velez, the Cooperman company began producing a signature series of frame drums adapted to playing using new syncretic techniques. Velez also played a key role in the development of international festivals and associations, such as the European Frame Drummers Meeting in Spain, Tamburi Mundi in Germany, Greek Frame Drums Meeting, Frame Drums Italia and the National Percussion and Frame Drum Association in Taiwan⁴⁴.

2. Ways of holding the instrument

2.1 Lap style

One of the most noticeable changes in the method of playing disseminated by Glen Velez is the way the instrument is held. The drum is not held by the musician in one hand, but rests on their thigh. The hand that held the instrument from underneath in the traditional grip now rests on top of it, so it is not encumbered and can remain relaxed. This results in greater articulative capabilities and freedom of movement, which also translates into broader dynamic range. This type of instrument holding has been previously seen with goblet drums such as the *darbuka* and *tombak*. Some other frame drums were also occasionally played this way (the Irish *bodhran* or the Mauritian *ravanne*), however these were rather isolated cases. The expansion of a new syncretic playing style meant that the lap style began to be used on instruments for which it had not been standard traditionally. This change also influenced instrument makers, who began to produce larger and heavier instruments that would be difficult to play with an underhand grip.

Ease of playing and sonic capabilities currently make this the dominant style⁴⁵.

The basis of this style is the seated position of the drummer. The torso is upright, the thighs should be positioned perpendicularly to the torso, and the legs slightly apart. The instrument is held on the left thigh⁴⁶, so that the membrane faces outward. The left hand rests on the frame of the drum at 12

⁴³ Ibidem.

⁴⁴ Idem, *Glen Velez*, "PAS Hall of Fame", [online] <https://www.pas.org/about/hall-of-fame/glen-velez>. [access: 21.07.2022]

⁴⁵ Apart from performing traditional music *in crudo*, obviously.

⁴⁶ This paper is written from the perspective of a right-handed person; however, all of these techniques can be adjusted by substituting the left hand for the right, and vice versa.

o'clock (if we treat the drumhead as clock face). It is crucial for the left hand to be relaxed in the resting position, stabilizing the instrument solely with its weight. The right forearm should roughly form a straight angle with the arm. The elbow should only be gently set apart from the torso. The drumhead should be parallel to the right forearm, so that the hand's positioning is natural and unconstrained. This also ensures that the back of the instrument does not directly face the musician's chest, so that the air between the frame and membrane can freely vibrate, lengthening the instrument's sound. Interestingly, the musician, covering the back of the drum with their body, not only shortens the decay of the sound, but also lowers its perceived pitch⁴⁷. In the resting position, the drum frame should touch the musician's body only at two points – with the left thigh underside, and the left hand and wrist on top. This allows the frame to vibrate more freely, which results in a longer and fuller sound.



Figure 9: Lap style position, auth. Wojciech Lubertowicz

2.2 Free hand

In this position, the instrument, which is positioned between the legs of the seated musician, is held by the calves (similar to a Baroque cello). As a result, neither hand has to hold or stabilize the drum, giving both hands the same articulatory capabilities. This technique was popularized by John Bergamo⁴⁸. The position makes it easier to use brushes, among others, and also allows to add an extra instrument held in *lap style*. This grants a number of possibilities of playing, but it also comes with certain disadvantages. The frame of the drum between the legs is dampened definitely more strongly than with other ways of holding it, which leads to a reduction in resonance and shortening the decay. Basically, apart from the instrument's position, the way of producing sounds is not significantly different from *lap style*, which is why it will not be described in this paper separately.

⁴⁷ Something reminiscent of an air cushion forms between the musician, the frame and the membrane, slowing down the vibration of the latter, and thus lowering the pitch.

⁴⁸ John Bergamo (1940-2013) – American percussionist and composer, long-time coordinator of the percussion department at the California Institute of the Arts. [online] https://en.wikipedia.org/wiki/John_Bergamo [access: 01.08.2022]

3. Basic sounds

3.1 Dum

In *lap style*, this sound can be produced in several ways:

- Thumb strike. This is relatively the easiest way to produce this sound, and very common among modern musicians. The strike is made with the outer edge of the right thumb (including the pad at its base, if playing a larger diameter instrument). The thumb itself should be slack and the strike should result from the forearm's rotational movement. This rotation imparts a high velocity to the thumb. It is important that the movement is stopped at the right moment before contact with the membrane, so that the released thumb strikes it with the force of inertia. This technique allows for a very rapid transition to the next sound, e.g., *pa*, or *tek*, making it useful for solo play. The disadvantage of this method is a less full sound than in the case of striking with a finger pad. Its disadvantage is a less full sound than that achieved when striking with a finger pad. The fundamental frequency of the drum is not as clear, and there is a greater proportion of higher aliquots in the attack, making the sound sharper.
- Striking the membrane with the tip of a slightly bent index finger (or, optionally, middle finger). The fullest sound can be achieved by striking about a quarter of the length of the instrument's radius from the edge. The wrist should be loose enough to allow the finger to bounce away freely after striking. The strike is led with an impulsive move starting from the arm (which may be practically invisible in the case of a fast tempo or low dynamics, but should not be omitted nonetheless), while the wrist remains slack. The fingertip begins then to act like the tip of a whip, achieving a high velocity with little effort. The force of the strike is directed perpendicularly to the plane of the membrane. The *dum* produced this way is a full sound, and the fundamental sound of the instrument can be clearly heard in it. The attack is precise, but the proportion of higher aliquots does not dominate the sound.
- On large drums, the *dum* can also be played with joined and straightened fingers (2-5) of the right hand. Such a strike makes it possible to play the *dum* much louder than with the thumb or index finger. The sound has a clear, strong attack. This is the technique traditionally used on the Iranian *daf*.

3.2 Tek

This is an open strike made with the right hand on the membrane's edge. The sound is high, bright and resonant, while only the higher aliquots should be heard. The strike is performed with the fourth finger, so that its pad hits the edge of the membrane exactly where it comes in touch with the frame. Precision is extremely important, because for this sound, moving the finger by even a few millimeters closer to the center of the membrane, or closer to the frame results in a distinct change

in the nature of the sound. When it is shifted towards the center, the proportion of lower aliquots increases, and the sound becomes less sharp. As the finger shifts towards the frame, the aliquots heard become gradually higher, but sounding them also requires gradually more force. Once the critical value is exceeded, the produced sound comes from the vibrating frame and resulting resonance of the membrane. The sound completely loses its bright and resonant character, becomes muffled and “wooden”, but the reverberation may still remain quite long. The ability to change the character of the sound’s timbre greatly enables operating on tone color, but it is important for such actions to be grounded in the intent of the musician, and not come from randomly striking in the wrong place. The timbre can be controlled to some extent by leaving the finger on the membrane after striking it. This can gently shorten the length of the drum’s sound and reduce the amount of higher aliquots, but not to the extent that would warrant considering the beat muted.

3.3 Ka

The sound is made by striking the edge of the drum with the pad of the fourth finger of the left hand.

Since the left hand is responsible for stabilizing the instrument with its weight, its base cannot be detached from the drum, which somewhat limits the dynamic capacity (although it is still broader than with the traditional grip). The strike should come from the wrist, and the finger should be slack. The *ka* can be also played with the left index finger (analogous to finger 4). If two *ka* sounds are to be made consecutively, this can be done using fingers 2 and 4.

3.4 Pa

In *lap style* position this sound is made with the entire right hand. The membrane is struck by the pads of all fingers and the base of the palm (the hand is placed in a natural position with slightly bent fingers). The fingers lightly strike the membrane and “stick” to it. To produce a softer, more “brushy” effect, the fingers should not come into contact with the membrane at the same moment, but with a minute offset. This sound can also be produced with the left hand by striking the membrane with fingers (2-4) so that the membrane’s edge is placed under their first joints. Since the contact area with the membrane is in this case much smaller, it is necessary to simultaneously dampen the membrane with the right hand, which is why the *pa* played with the left hand tends not to occur independently, but rather in sequence with sounds produced with the right hand.

4. Split hand

Split hand is a technique adopted from India, where it is used with drums such as the *kanjira*, *mrdangam*, or *tabla*. It allows the musician to make a series of *pa* sounds in very quick succession. In the technique borrowed from *kanjira* playing, beats are performed with the right hand divided into two groups of fingers: 1-2 and 3-5. Both of these groups should strike the same area of the

membrane, taking advantage of the rotary motion of the wrist and the up-and-down motion simultaneously (the fingers should draw “eights” in the air). While performing the strikes, the base of the hand constantly rests on the membrane, thereby dampening it. A variant of this technique is the *split hand* borrowed from *table* playing. It differs from the previous approach by an additional *pa* strike made by the left hand. The sequence of four *pa* sounds looks then as follows:

R(1-2) L (2-5) R(3-5) R(1-2).

The concept of dividing the hand into two groups of fingers can be also used for other sounds. *Tek* can be performed alternately with the finger pads of the 2nd and 4th finger of the right hand, just as the *ka* with the corresponding fingers of the left hand. This variant is sometimes called the *split finger* technique and is borrowed from the Turkish school of *darbuka* playing.

5. Snapping

The name of this technique, adopted from drums such as the *tombak* or the Caucasian *dohol*, is self-explanatory. It allows for a significant increase of the energy with which the rim is struck (*tek* and *ka*) without increasing the force needed to play these sounds. Snapping can be done with both hands, but in this specific case, the left hand is favored (due to the comfort of having the thumb rested on the frame). With this technique, the theoretically weaker left hand can produce loud, accented rim sounds. The snap can be performed with various fingers (basically all except the thumb, which acts as a “trigger”). In the case of fingers 3 and 4 (playing with the fifth finger is also possible, although it is a rare occurrence), the drum rim is struck when the finger pads slip from the thumb. Striking with the index finger is slightly different and can be done by slipping off the top of the third finger. After playing with this finger the hand naturally regains an open position, thus becoming ready to produce another series of snaps.

6. Brushes

Very interesting sonic results in playing frame drums can be achieved through the use of brooms. In the *free hand* position, brushes can be held in both hands and used to both rub the membrane, and striking (with techniques adopted from the snare drum, for example). Most often, however, the brush is held only in one hand (the left one). This allows the right hand to perform strikes typical of frame drums, while the fills played with the left hand gain more color.

In the *lap style*, the mobility of the brush held in the left hand is limited, which is why it strikes the membrane rather than rubbing it. The sound produced is abundant in high frequencies, quite short, “brushy” in character, with no clear perceptible pitch (the drum’s fundamental frequency is quickly muted).

Interesting color effects can be produced by striking the fingers of the right hand on the broom

when it touches the membrane. The resulting sound is somewhat reminiscent of the sound of the bendir, but the resonance is much shorter and more aggressive.

The above is not, of course, not an exhaustive account of all possible ways of playing frame drums. The described techniques are, however, so well established in modern performance that they can be considered the core of a constantly developing syncretic playing technique. Other possible ways of playing will be discussed in Chapter VI, in the context of the pieces that make up the entire artistic work.

V. Description of instruments used to record the artistic piece

1. Bendir

membrane – single, natural leather (probably goatskin)

diameter – 42cm

frame – wooden (bent, three-layer plywood)

frame depth – 10cm

additional sound enriching elements – two strings made of nylon

tuning system – none



Figure 10: Bendir, auth. Wojciech Lubertowicz

The *bendir* is an instrument popular in North African countries, especially in Morocco, Algeria and Tunisia. It differs from the *tar* primarily in the strings on the underside of the membrane, which used to be made out of intestines, but are nowadays usually made of string or thick thread. Some Moroccan versions still have additional metal plates installed in the frame. The instrument comes in different sizes, but the diameter is usually about 40 cm. The frame can be quite deep, which is why it has a special opening or cutout for the thumb, which enables comfortable playing in the traditional way, holding the instrument with one hand from the underside.

The instrument used in the recordings was made in Tunisia and is a typical traditional drum. The frame is made from a bent wooden panel, itself made out of three layers of plywood. The membrane is made of thinly tanned leather, most probably goatskin. The drum has two nylon strings stretched on the underside of the membrane. Due to a rather wide frame, in order to make it possible to play the drum in the *upright style* position, there is a special thumb hole. It has been lined with leather, which makes holding the drum more comfortable. The deep frame also increases the comfort of playing in the *lap style* position.

2. Tar

membrane – single, synthetic
diameter – c. 41 cm
frame – wooden (bent, single-layer panel)
frame depth – 10 cm
additional sound enriching elements – none
tuning system – rods inside of the frame



Figure 11: Tar, auth. Wojciech Lubertowicz

The *tar* is a medium-sized drum popular in Middle Eastern and North African countries. It usually does not have any additional elements that affect the sound. The frame is most often quite shallow and adapted to playing with the traditional technique with an underhand grip.

This particular instrument is a modern version of the *tar*. It was manufactured by the American company Cooperman with both traditional playing (for this purpose the frame has a special hole for the thumb) and *lap style* (a wide frame allows the drum to stably rest on the thigh) in mind. The synthetic membrane imitates natural leather quite well and is not affected by the elements. In addition, the membrane tension can be changed using a system of rods on the inside of the frame. The instrument is characterized by a long decay and a full, aliquot-saturated sound, not often found in drums with synthetic drumheads.

3. Riq

membrane – single, natural leather (fish skin)
diameter – 21 cm
frame – wooden
frame depth – c. 6 cm
additional sound enriching elements – five double pairs of
brass plates (diameter – c. 6 cm) suspended in holes in the
frame
tuning system – rods inside of the frame



Figure 12: Riq, auth. Wojciech Lubertowicz

The *riq* is a very popular instrument in North African and Middle Eastern countries. It is one of the fundamental percussion instruments in Arab music. This small-sized drum, due to its complex playing technique, is at the same time one of the most demanding instruments. This particular *riq*

was made in Poland by Jacek Żelazek. The frame is slightly modified from traditional instruments, as it is made of several wooden blocks glued together, subsequently sanded down to produce the desired circular shape. The brass plates (20 in total) are hewn by hand. The instrument has a natural membrane made of fish skin. A tuning system was also implemented, making it possible to play even in unfavorable weather conditions.

4. Kanjira

membrane – single, natural leather (probably goatskin)
diameter – c. 15 cm
frame – wooden (made from a single, hollowed-out piece of trunk)
frame depth – c. 8 cm
additional sound enriching elements – none
tuning system – none



Figure 13: *Kanjira*, auth. Wojciech Lubertowicz

The *kanjira* is one of the smallest frame drums. It is popular in southern India in Carnatic music. It has one pair of small, metal plates (sometimes made of coins). A less popular *kanjira* from Bengal was used to record the work. It has no plates, and the frame, made from a single piece of wood, is slightly deeper. The membrane is made of goatskin, whereas lizard skin is usually used in South Indian versions.

5. Daf

membrane – single, synthetic drumhead
diameter – c. 54 cm
frame – wooden (bent, single panel)
frame depth – c. 5 cm
additional sound enriching elements – several chains of metal ringlets attached to the inside of the frame
tuning system – none



Figure 14: *Daf* (view from behind), auth. Wojciech Lubertowicz

This particular instrument was made in Iran⁴⁹ and has a modern membrane made of plastic. Since it has no tuning system, an instrument of this size with a membrane made of natural leather would be very sensitive to changes in humidity. Thanks to the synthetic drumhead, the instrument is also suitable for playing in Polish climate conditions.

⁴⁹ For a general discussion of the instrument, see Chapter II, subsection 3.3.

6. Polish frame drum

membrane – single, natural leather (most probably goatskin)
diameter – c. 35 cm
frame – wooden (bent, single panel)
frame depth – c. 6 cm
additional sound enriching elements – metal jingles
tuning system – rods on the outside of the frame



Figure 15: Polish frame drum, auth. Wojciech Lubertowicz

The traditional Polish frame drum, typical of folk music in the Radom region, among others, was used to accompany fiddles and basses⁵⁰ played to dancing. This particular instrument was made by Piotr Sikora from Kuźnica near Przysucha. It is a typical folk instrument, and therefore certain solutions may seem somewhat surprising. The plates, for example, were cut from metal roofing tile. The original hook-ended screws used to adjust membrane tension had to be replaced with parts from modern drums, due to the threads becoming worn out. The instrument has a rather thick membrane typical of instruments played with a mallet, but it is sufficiently tanned to make playing with fingers possible, which is also showcased in this artistic work.

7. Mazhar

membrane – single, natural leather (calfskin)
diameter – c. 56 cm
frame – wooden (bent, single panel)
frame depth – 10 cm
additional sound enriching elements – none
tuning system – pneumatic



Figure 16: Mazhar, view from behind, visible valve of the pneumatic tuning system, auth. Wojciech Lubertowicz

A contemporary instrument manufactured by the Berlin-based David Roman Drums. Due to its size

⁵⁰ This refers to a folk stringed instrument similar to a cello.

and weight, it is not designed for playing in the traditional technique with an underhand grip. Instead, it is well suited for playing in *lap style* and *free hand* positions. It does not have any additional elements affecting the sound. The name proposed by the manufacturer may be slightly misleading, as another instrument, found, among others, in Egypt, is also known as the *mazhar*, and is a larger and heavier bass variant of the *riq*. There is also the name *mizhar*, which in Syria denotes a large, deep frame drum⁵¹, and therefore seems to be a more appropriate term for this drum. Nevertheless, since this particular instrument was made in Berlin, and is not directly associated with either of the aforementioned countries, the name given by the manufacturer will be used in the remainder of this paper.

This instrument is an example of the influence of syncretic playing technique on drum design. The producer no longer had to take into account that a musician would have to bear the entire weight of the drum in one hand, and as a result the deep frame does not have any openings or cutouts to support an underhand grip. The frame is quite thick and bulky, and therefore its vibrations are not easily dampened when playing in the *free hand* position.

The drum is crafted very precisely, with great attention to detail. The profile of the frame allows comfortable playing in the *lap style* position. The leather membrane is quite thin and is characterized by a long sound, rich in aliquots. The greatest asset of this drum is its pneumatic tuning system. This innovative solution grants a very wide range of sonic capabilities, presented in this artistic work.

8. Other percussion instruments

In addition to the instruments mentioned above, the artistic work also features the Irish *bodhran* frame drum, played by Patrycja Betley in “Shapol”. The Iranian *tombak* goblet drum, played by Arad Emamgholi, resounds in the same piece. “Persepolis” features an Arab *darbuka* goblet drum played by Adeb Chamoun.

⁵¹ It often has attached legs and is played in a horizontal position.

VI. Description of the compositions that make up the artistic piece

The artistic work consists of twelve miniatures for various frame drums based largely on improvisation. They broadly and diversely showcase the capabilities of these instruments, which result from the application of syncretic playing technique and the sonoristic values associated with it. The creation of these miniatures was possible by the many years of experience, musical experimentation and exploration I have pursued during my artistic career. I opted for an improvisational character of the pieces, since improvisation has always been the closest form of music performance to me. It is also an indispensable part of the musical tradition of the Middle East, but also of Polish folk music. Finally, it was through improvised music sessions, that led Glen Velez to the idea of combining disparate playing techniques, which ultimately gave rise to the syncretic playing technique.

Based on the performance instrumentarium, the pieces can be divided into three categories:

1. Solo pieces: “Depressed”, “Duosolo”, “Frame drumming”, “Oberracje”, “Wymiatany”.
2. Pieces for multiple instruments, recorded by the author on his own using the *overdubbing* method⁵²: “Drummelodies”, “Tarburyn”, “Wariacje mazurkowe”.
3. Pieces for multiple instruments, recorded during a live session with invited artists: “Afgano”, “Persepolis”, “Shapol”, “Szesnastkowy”.

The recordings on the album are made almost exclusively on percussion instruments, with only two tracks (“Afgano”, “Persepolis”) featuring additional melodic instruments, and one (“Persepolis”) also featuring vocals.

1. *Drummelodies*

As the title, which is a juxtaposition of two words – drum and melody – may indicate, the creation of this piece was guided by the concept of demonstrating the melodic sound potential of frame drums. This melodicity manifests itself in two ways. The first is the four-sound based, ostinato melody recorded on a *mazhar* drum with a pneumatic tuning system manufactured by David Roman Drums. This melody begins the piece. Its meter is irregular, with the entire ostinato melodic cycle made up of eight bars. The second bar is on 5/5, the eighth on 7/4, and the remaining bars on 6/4. The entire piece consists of eight repetitions of the cycle. In the second and sixth repetitions, the last bar is extended. The piece had to be recorded by layering tracks, as performing the melody on a single drum was unfortunately impossible.

The second aspect of melodicity is the improvisational character of the part played on the *tar* drum. It is achieved not by changing the tension of the membrane, but by producing various aliquots from it. This is done by gently muting the membrane at its nodal points with the left hand while the right

⁵² A recording method based on adding new layers to parts recorded previously.

performs the beats (the principle is similar to playing string harmonics on stringed instruments). The part develops in variation as the piece progresses, by thickening the texture and introducing more techniques, so that in the sixth repetition of the ostinato melody, it develops into a virtuosic solo using techniques such as *snapping* and *split hand*. After the climax, the eighth repetition of the cycle sees the return of the original simple melody, based on aliquots. Both the *mazhar* and *tar* parts are performed in *lap style* position. The technique for producing aliquots is borrowed from goblet drums such as the *darbuka* or *tombak*. The membrane is muted by the lower edge of the right hand, though there is also a variant involving the use of the outer part of the thumb for this purpose, while the left hand plays the *ka* sound. This technique works quite well on drums with strong resonance and long decay, so that even when the membrane is slightly dampened, the sound is still sonorous. Thanks to its synthetic drumhead, the tar used in this piece is a perfect implement for utilizing this technique.

The sound of the piece is made complete by a separately recorded part imitating the sound of brushes, produced by rubbing the membrane of the *tar* with finger pads and fingernails, and a track of Chinese bells made with alternating muted and open sounds, played consistently in 2/4 and thus introducing an element of polymetry.

2. Frame drumming

As the somewhat tongue-in-cheek title indicates, this piece explores the sonoristic capabilities of the drum frame. A *tar* (from Cooperman Drums) was used for the recording. Its wide, ashen frame, allows the instrument to be used in an unconventional way. No sound in the recording was produced by directly striking the drumhead. However, the vibrations of the frame are transferred to the membrane, which amplifies and supports its resonance, so despite the lack of direct membrane strikes, its sound is clearly audible. The drum is held in the *lap style* position. The piece is improvisational in character. Initially, the sounds follow not too densely after each other, giving time for the sound to resonate. The characteristic, somewhat bell-like, long-resounding bass sound is made by striking the back edge of the frame with the underside of the fist. To avoid dampening the resonance, the drum can be lifted slightly at the moment of impact, so that the frame does not touch the thigh. This sound is treated as the equivalent of a *dum* in this piece. Obtaining a wide range of tones and colors is possible through striking with different parts of the hands, which differ in hardness. This is analogous to playing kettledrums using different types of mallets. The harder the striking part of the hand is, the sharper the sound one might expect to hear. The sounds in the piece were produced by using finger pads, knuckles and fingernails. Fingernail strikes are characterized by the fastest attack and relatively low stimulation of vibration of the frame, and therefore also the membrane. Knuckle strikes produce a strong sound with a firm attack, which also has the most “wooden” quality. Playing with finger pads allows for a wide spectrum of timbres,

from soft and warm when striking lightly, to sharp and bright when striking harder. With stronger strikes, the audibility of membrane resonance in the overall sound increases.

The unhurriedly unfolding improvisation gradually thickens, to return to single, long-sounding notes after reaching the climax.

3. *Wymiatany*

The piece, characterized by an etude-like quality, demonstrates the sonic capabilities granted by the unconventional use of a brush. The piece was recorded on the *tar* in the *lap style* position. The brush was held in the left hand with a special grip developed by the author, which performing flourishes that would be otherwise difficult to achieve. The index finger can strike the membrane independently of the brush. The strike can be made in one motion, so that the brush falls on the membrane first, followed immediately by the index finger. After adding a single strike made with the right hand, the result is a characteristic triplet flourish. The result of the search for new sonoristic capabilities is also another technique inspired somewhat by the *kanjira*. It entails pressing the membrane with the brush, thus changing its tension and, consequently, the pitch. The resulting effect is not so much a distinct change in pitch, but rather a subtle but significant modulation of its reverberation. Both of these techniques are audible in the fragment at 1:53-2:20. The brush was not used in this piece for classical playing by rubbing the membrane. Instead, the fingers of the right hand were used in this capacity (an effect heard at the beginning of the 4th minute of the recording).

Strikes with the right hand can be made both directly on the membrane, and on the brush placed on it. This allows for a broad range of sonoristic capabilities. The brush might only gently touch the membrane when struck with the right hand, producing a twangy hum, while enabling a long resonance. When the pressure on the membrane increases, the sound becomes noticeably shorter, drier, and gains a harsher quality. When striking far from the brush pressed against the membrane, if the pressure applied is strong enough, the brush acts more like a dampener than a sound-enriching element. The entire improvisation maintains a single tempo in 12/8 meter.



Figure 17: Special brush grip, auth. Wojciech Lubertowicz

4. *Tarburyn*

The title of the piece is a juxtaposition of the names of two drums, the *tar* and the tambourine. The drum on which it was recorded is also the product of such a combination, as the tambourine was attached with a clip to the interior of the *tar*'s frame. The “tarbourine” was used to perform an improvised solo part accompanied by the *bendir*, which was recorded earlier and is heard from the beginning of the piece. The concept behind this piece was to show a different approach to expanding the sonoristic capabilities of an instrument, this time not just through playing technique, but by modifying the design of the drum itself. This modification is not permanent, and can easily be undone by unfastening the clip. The resulting sound effect is slightly different from that which could be obtained by simply playing the drum with the plates that were installed in it originally. The membranes of the *tar* and tambourine, placed close together, vibrate and interact with each other through the vibration of the air between them, as well as through the vibrations carried by the frame itself. The sound of the drum is therefore the product of the resonance of the two membranes, as well as the hums generated by the tambourine's plates. When played lightly, they do not clang too strongly, introducing merely a bit of color, corresponding to the inherently twangy sound of the accompanying *bendir*. With stronger playing, their bright, metallic nature becomes more evident (especially in strong, muted beats). The parts of both instruments were performed in the *lap style* position. The *snapping* and *split hand* techniques played a major role in the improvisation on the *tar*. The piece is kept in a 5/4 meter.



Figure 18: *Tar* with a tambourine attached on the inside, auth. Wojciech Lubertowicz

5. *Depressured*

The title of the piece may indicate depression or despondency; however, it is also meant to literally refer to lowering pressure. This is because the piece is intended to showcase the sonoric capabilities resulting from the use of a pneumatic drum tuning system⁵³. It was recorded on a *mazhar* drum equipped with such a system. The piece is a free improvisation performed *ad libitum*. Apart from *split hand* and *snapping*, the piece uses several other interesting playing techniques. The sound that begins the improvisation, reminiscent of whale song, was emitted by rubbing the membrane with a slightly moistened finger, causing it to vibrate. The tremolo that immediately follows is an adaptation of an Iranian *tombak* playing technique. The *riz* (as this technique is called) is played with all fingers of both hands, with the fingers as relaxed as possible, and strikes driven from the wrist. This makes the tremolo dense, but at the same time soft in sound.

The pneumatic tuning system allows the drum pitch to be lowered smoothly. This occurs several times during the piece (the first occurrence is at 01:29). To release the air, the left hand presses the valve placed in the interior of the frame. The other hand can keep on during this time (02:04-02:17). The tremolo heard at this point is a variation of the *split hand* technique and is executed with one hand. The strikes are performed alternately with the thumb and the ring finger, powered by the rotating motion of the wrist.

The piece ends with sub-bass sounds that result from hitting the frame with the bottom of the fist, with the drum completely deflated. The sound obtained in this way is somewhat reminiscent of the effects produced on a *lastra* (sheet metal), sometimes used for imitating the sound of a thunderstorm, which complements the depressive tone of the piece.

6. *Wariacje mazurkowe*

This piece, recorded using the *overdubbing* method, combines different ways of treating frame drums in an eclectic way. Mazurka rhythms, typical of the traditional music of the Masovian lowlands, are intertwined with the Kurdish *daf* and the Tunisian *bendir*. This is accompanied by the Bengali *kanjira*, which plays the role of a melodic soloist, and the Arab *riq*. The basis and starting point of the composition is the tripartite oberek rhythm played on a Polish frame drum. It is performed in the traditional manner, as the beats are made with a wooden, cloth-wrapped mallet and the base of the hand (in order to trigger the plates). The Polish drum is joined by the *daf*, imitating the rhythmic accompaniment usually played by the bass or second violin, called the *sekund*, with a characteristic accentuation placed on 2 and 3. The resulting accompaniment is joined by a melodic *kanjira* part, inspired by a traditional mazurka melody normally played on the violin or sung. At a certain point the rubato, mazurka rhythm is interrupted, and the oriental *bendir* and *riq* assume a leading role, playing constantly in the same tempo and meter, but without the characteristic rubato,

⁵³ See Chapter II, subsection 4.4.

leading to a drastic change in the nature of the rhythm. In the part of the *riq* held in cabaret position, the soloistic use of the jingles against the accompaniment of the *bendir* and *kanjira* draws attention in particular. The mazurka rhythmic pattern soon returns, forcing the two pulsations to coexist, and thus creating a new syncretic rhythm that shimmers with diverse colors. The roles initially assigned to the instruments begin to blur, with the *riq* taking over the oberek rubato at one point, and the *daf* and *bendir* taking over the narrative lead. At a certain point, the rhythm comes to an abrupt stop and the *kanjira* is left alone with its melody. After a while, the other instruments turn back on, and at the climax the piece ends with a fragment characteristic of the oberek and mazurka. The composition as a whole is an attempt to reinterpret and look anew at the issue of Polish traditional music, specifically at the pulsation of dances such as those mentioned⁵⁴. The new sonoristic qualities obtained in this piece are the result of not only the use of new playing techniques, but also (and perhaps mostly) of the juxtaposition of instruments hailing from diverse cultures and exhibiting varying approaches to the pulsation.

7. *Oberracje*

The somewhat humorous title, which is a combination of the words *aberracja* (aberration) and *oberek*, suggests that the rhythm of this dance will be subject to all sorts of deviations. This is indeed what happens. The improvised composition is formally similar to “Wariacje mazurkowe”, with changes in the nature of the pulsation while maintaining tempo and meter, but is recorded with only one solo instrument – the Polish frame drum, which traditionally accompanies dancing. What is non-traditional, however, is the playing technique used to record this piece. The drum was not held in one hand and struck with a mallet held in the other, but was played in the *lap style* position using syncretic techniques inspired by oriental drums. Some elements of the traditional playing style, were, however, utilized in a slightly modified way. The jingles were triggered by striking the edge of the drumhead with the base of the hand, just as in the original style, but the thumb was used instead of the mallet to produce the bass sound of the membrane. Admittedly, the *lap style* position makes it impossible to move the drum in order to use the jingles independently of striking the membrane, but it provides the opportunity to use all contemporary techniques such as *split hand* or *snapping*. It is worth noting that despite the use of the same techniques as with the *tar* or *bendir*, the instrument’s sound is different. This is due to a different tanning of the membrane. It is slightly thicker than that of oriental drums, being thus better suited for playing with a mallet. The sound is therefore darker, less saturated with aliquots, and has a shorter decay. The difference between a bass *dum* and an edge *tek* is not as pronounced as on drums with a thinner membrane, however such sounds can still be successfully produced on this instrument. The sound obtained this way may be somewhat reminiscent of that of the *bodhran*, i.e., the Irish frame drum, however the constantly

⁵⁴ When referring to traditional, non-stylized folk dances, these names can sometimes be used interchangeably. See: <http://archiwum-gana.pl/project/mazurek-czy-oberek/>.

resonating jingles provide the sound with additional color. The plates, due to the material from which they are made (metal roofing tiles), are not as sonorous as those of the *riq*, but their sound is drier and crispier, lending a raw tone to the instrument's overall sound. "Oberracje" show how the use of a different playing technique can influence the sound of an instrument, allowing it to produce sonorities impossible to obtain in traditional play.

8. Afgano

Mateusz Szemraj – *rubab* (*rabab*)

Wojciech Lubertowicz – *mazhar*

The piece was recorded in duet with *rubab* player Mateusz Szemraj. The *rubab* is an Afghan string instrument from the lute family. Its body is made out of a hollowed out single piece of wood, and instead of a soundboard it has a glued-on leather membrane on which the bridge rests. In addition to melodic strings, the *rubab* also has a number of resonant strings, enriching the sound of the instrument and providing a reverb-like effect. The drum part was played on a *mazhar*. A pneumatic tuning system was used here to tune the drum to the base sound to the scale in which the improvisation was performed. This gave the drum a new role, making it not only responsible for the rhythm, but also acting as a drone, thus becoming a tonal center, so to speak. This way of using the instrument is unheard of in traditional laying, where frame drums are considered more of an instrument of indefinite pitch.

"Afgano" results entirely from improvisation, with the scale played by the *rubab* as the only predetermined element. After an unhurried introduction played just by this instrument against the background of a gentle drum tremolo, a melodic and rhythmic theme appears, which, after several variational repetitions, transforms into a concerted solo. After reaching a climax, the theme returns, fading quickly.

Techniques such as *snapping* and *split hand* were used on the drum held in *lap style* position.

9. Szesnastkowy

Arad Emamgholi – *daf*

Wojciech Lubertowicz – *bendir*

"Szesnastkowy" (sixteenth) is an improvised, etude-line piece for the *daf* and *bendir*. It is the result of a meeting with an accomplished *daf* player from Iran, Arad Emamgholi, who makes virtuosic use of the sound capabilities of his instrument. Although he also utilizes syncretic techniques in his playing, he holds the *daf* traditionally, with a grip from underneath. This is because in the case of this drum, holding it in the *lap style* position would not only not expand its sonic capacities, but, in fact, severely limit them, as it would be impossible to shake and tilt the instrument to trigger the metal rings. Another interesting aspect is the way of playing denser rhythmic values that appear as

the piece progresses. On the *daf*, these are performed alternately with both hands, the so-called “ones”. On the *bendir*, played using contemporary techniques, these types of densities are executed by using the *split hand* and *split finger* techniques. The piece begins with sixteenth-note runs played *pianissimo*, hence the title. The sixteenth notes are played synchronously by both drums, but with variations in accents and types of sounds produced. As the dynamics increase, the tempo settles, allowing for additional thickening of the texture and dialogic stunts by the soloists. The piece breaks off after a climax brought on by a *crescendo* of the tremolo played on the *daf*.

10. *Duosolo*

The piece is a free improvisation kept at an *ad libitum* tempo. As the name might suggest, it was recorded on two drums simultaneously. The *bendir* was held in the *lap style* position, while the *mazhar* was held in *free hand* position. Such a combination, thanks to the use of these two positions, is viable and quite comfortable, but is not without certain limitations. Since the left hand must maintain the balance of the drum placed on the knee, only the right hand can play both drums. It is also the only one that can make the *dum* sound. While this may seem like a major limitation, the sonic results do not appear to support this claim. The instruments work in dialogue, but also cooperate with each other. Since they are played by one person, it is possible to fully synchronize them, which is difficult to achieve in ensemble improvisation. The role of the instruments is balanced, although it is the *lap style bendir* that could theoretically be privileged. It resounds with more quick flourishes and is more “mobile”, yet the bassy, meaty sound of the *mazhar* balances this disproportion. In the piece, one can hear the use of various syncretic playing techniques, such as *split hand* or *snapping*, as well as various types of membrane rubs. Also notable is the effect of changing timbre depending on the minimal differences in where the edge of the membrane is struck. This is especially audible at 2:50-3:05. Both hands perform the strikes synchronously, making the sound of the effect even more interesting and distinct. The piece ends with a single *dum* played on the *mazhar*.



Figure 19: Combination of free hand i lap style positions, auth. Wojciech Lubertowicz

11. *Shapol*

Patrycja Betley – *bodhran*

Arad Emamgholi – *tombak* (Kurdish version)

Wojciech Lubertowicz – *mazhar*

“Shapol” means *wave* in Kurdish. The piece is precisely such a wavy, improvised impression, in which diverse traditions come together and mingle. The Irish *bodhran* meets the Kurdish *tombak*, and the inspired by Middle Eastern drums, but modern in terms of construction *mazhar*. These traditions coexist, influence and inspire one another. The piece begins with the slow sounds of the *tombak*. The Kurdish version of this goblet drum differs from its Persian counterpart in the material from which the instrument’s body is made. The Persian *tombak* is made from a single, hollow piece of wood. The Kurdish *tombak*, on the other hand, is made of metal sheet. The *tombak* is soon joined by the *bodhran*. This is a popular frame drum in Ireland, which is played with a short wooden stick, known as a *tipper*. Despite its visual resemblance to oriental frame drums, the *bodhran*’s sound is distinctly different. It is short, dry, but at the same time quite warm and well-rounded. When playing the *bodhran* with a stick held in her right hand, Patrycja simultaneously modulates the pitch with her left hand. This modulation is achieved by touching various places on the inner side of the membrane with the left hand, which differs from the techniques used with the *kanjira*, *darbuka* or *tombak*. The *bodhran* is held on the thigh on a sitting position, somewhat like the *lap style* position, however the membrane faces the torso perpendicularly. The *tombak* and *bodhran* are finally joined

by the *mazhar*, initially playing various sonoristic effects resulting from rubbing the membrane. The improvisation gradually intensifies by thickening the texture and slowly increasing the tempo. After reaching a climax, the sonic matter thins out for a moment, only for the *mazhar* to initiate the next wave with a rhythmic motif that continues until the end of the improvisation. After reaching the second climax, the rhythm “scatters”, and the *mazhar* repeats the motif starting the second wave four times as a *coda*.

12. *Persepolis*

Arad Emamgholi – *daf*

Adeb Chamoun – *darbuka*

Wojciech Lubertowicz – *bendir*

Dariush Rasouli – *ney*

Mahsa Mohammadi – *vocals*

A piece in which improvised solo performances by the musicians are played in succession to a simple ostinato accompaniment of the other instruments. After an eight-bar introduction played on all drums in unison, the first solo is played by the *bendir*. It is short and flashy, played in *lap style* position, with many different kinds of flourishes played using *split finger*, *split hand* and *snapping* techniques. The *bendir*, due to the high humidity on the day of recording and the lack of a tuning system, sounds quite low. In no way does this however hinder the playing. Immediately following the *bendir* solo is a solo played by Adeb Chamoun, Syrian *darbuka* virtuoso. The original use of the *split finger* technique adopted for frame drums precisely from the *darbuka* can be heard here. After Adeb’s solo, the improvisational space is taken over by the *daf*. In the short solo, played with traditional technique by Arad Emamgholi, attention is drawn to the excellent, precise articulation of sound, very difficult to achieve on this instrument. After the *daf* improvisation, the drums quiet down, leaving space for the Persian *ney* flute, played by an Iranian, Dariush Rasouli. The Persian *ney* is one of the most demanding flutes in the world. This is due to a very distinctive playing technique, requiring the insertion of a metal collar, located on top of the reed flute, between the upper front teeth. The *ney* is joined by Azerbaijani-born Mahsa Mohammadi with a short vocal solo. Attention may be drawn to the unfamiliar to the European ear, microtone-based scale the singer uses to accompany the *ney*. After the singing part, the *ney* takes control once again and leads to a climax, after which the rhythm played in unison in the introduction returns, thus framing the entire piece.

Conclusion

The starting point for the creation of this artistic work was my fascination with the sonic capabilities of frame drums, as well as the multitude of diverse techniques for playing them. Equally fascinating to me was the very process of forming a new approach to these instruments, which have, after all, been present in human culture for millennia. One could presume that everything that could be achieved on these drums must have already been accomplished a long time ago. It turns out, however, that there still are some undiscovered areas and sounds that have never been produced by these instruments before. The syncretic playing technique described here should not be considered as standing in opposition to traditional techniques. Rather, it is their creative expansion, removed from the rigid framework of cultural trappings, allowing frame drums to produce new sonoristic qualities. The presented work is my original contribution and interpretation of this phenomenon. The new sound qualities resulting from the use of syncretic playing technique are showcased in it in a variety of ways. Great emphasis is placed on showing the soloist potential present in these drums, however the work also demonstrates the potential for a multi-timbral accompaniment of other instruments (including other frame drums).

In the descriptive part of the work, Chapter I briefly recounts the history of frame drums, ranging from the Neolithic period to the present day, and provides their definition. Chapter II discusses the construction of these instruments, the materials they are made from, and how these factors influence their sonic characteristics. Chapter III describes the basic principles of traditional playing technique on selected frame drums used in the recorded artistic work. The selection was narrowed down to five instruments, with the *tar* and the *bendir* described jointly. The choice was based on the desire to demonstrate the differences in approaches to playing these instruments, but also the great importance of these techniques for the formation of a new syncretic playing technique. In Chapter IV, which is devoted to this specific technique, presents its origins and the profile of its precursor, Glen Velez. The ways of holding the instrument are also discussed, as well as the different ways of extracting the basic sounds and the resulting sonic effects. The chapter also indicates from which instruments the various playing techniques were borrowed. Chapter V introduces the frame drums used to record the artwork with brief descriptions of the drum types. It presents construction parameters, such as the dimensions and materials of the instruments, as well as possible differences between the actual pieces and their traditional prototypes. The final Chapter VI describes the pieces that make up the artistic work, with a special focus on the new sonoristic qualities obtained using syncretic playing techniques.

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