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COSMIC DANCE. CORRELATIONS BETWEEN DANCE AND COSMOS-RELATED IDEAS ACROSS ANCIENT CULTURES

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ABSTRACT

Humanity's integration into the cosmos is fundamentally shaped by the perception of structured celestial movements: the rotation of the celestial sphere and the various regular paths of celestial bodies. Participating in these cosmic regularities has been an objective of human cultures since ancient times. Reproducing their structures may serve to participate in their power and to manipulate or to stabilize their effects. Dance as a rhythmic pattern of movement is a cultural expression especially prone to re-enacting the structured cosmic movements. Hence, ancient traditions have considered manifold relations between dance and ideas about the cosmos. Cultural traditions reporting "cosmic" aspects of dances refer to: (1) the dances of celestial bodies themselves, whose interpretations are based on concrete observations such as the apparent looping of the planets; (2) human dances which are in some sense related to celestial bodies or celestial events, e.g. by costumes which equip a dancer with celestial symbols; and (3) the creation of the cosmos, ascribed by some myths to dance, and the repeated ritual renewal, reassurance, and stabilization of the primordial cosmic order through dance.

This article on the one hand considers the definition of "dance" and the elements which make dance a "cosmic dance". On the other hand it considers which astronomical phenomena might particularly fuel the idea of a cosmic "dance". Examples from different cultures worldwide serve as illustrations.

KEYWORDS: dance, body, ritual, cultural astronomy, comparative mythology

INTRODUCTION

Since ancient time, humans watch the sky and perceive the structured, rhythmic movements of the celestial sphere and the celestial bodies. Many cultures have connected these notions with the idea of dancing. They have interpreted the celestial movements as dances, and they have tried to reproduce these movements in their own dances.

Dances are omnipresent in ethnographical literature. But the descriptions often are either sparse and very generalizing, or they get lost in details. Thus, maybe astronomical or - generally spoken - cosmos-related aspects of dances often are hard to identify (for the general problems of reporting and analyzing dances, see Kurath, 1960). Hence, it is the primary aim of this article to describe some basic categories which allow one to term a dance a "cosmic" dance. This will be done by reference to a few selected examples. It is explicitly mentioned here that the enormous material from Classical and early Christian Antiquity is not the focus of this article, as it has been elaborately treated in the work of Miller (1986). Therefore, this article will give preference to lesser-known examples from other cultures wherever they are available.

Before going into details, the use of the term "dance" in the context of this article has to be clarified. What is "dance"? A waltz or a rock 'n' roll will be generally agreed to be a dance, but what about a ceremonious circumambulation: can it be a "dance", too? Is music an essential element of dance? Definitions of dance are heavily struggling with such questions. A universally valid definition of dance has not yet been found (Woitas, 1998: 229). There are attempts to fix at least some essential aspects of dance. These stress three basic parameters, that is to say the body, the space and the time. Dance is essentially characterised by a deliberate shaping of these three parameters (Woitas, 1998: 230; Kaeppler, 2001: 362): (1) the body with its posture, its movements and its dressing; (2) the space – the space which is created and taken up by the dance, but also the space where a dance takes place, be it a ballroom or a temple; and (3) the time, which is generated by the metre and the rhythm and by the transitory character of movements. But the temporally and spatially organized rhythmic patterns of bodily movements that characterize dance are not specific for dance alone but are also shared by rituals, ceremonies, games or sports (Kaeppler, 2001: 362). Here an indistinct transition between different kinds of bodily movement becomes evident. These difficulties in differentiating dance from other forms of structured body movement will inevitably be reflected in the examples chosen for this article.

The three elements – body, space and time – which are the basic parameters of dance also describe important characteristics of celestial movements: celestial movements are performed by celestial bodies; they are restricted to a given space as it is; for instance, the zodiac describing the running way of the planets; and they are structured and rhythmic, defining a concrete time. This parallelism between characteristics of dance and characteristics of celestial movements provides the first indications of how astronomical – or, generally, spoken: cosmic - elements can be integrated in and expressed by dance.

Looking for cosmic aspects of dances, a first distinction can be recognized: The cultural traditions refer to (1) the dances of celestial bodies themselves and (2) human dances which are in some sense related to celestial bodies or celestial events.

1. COSMIC DANCES OF CELESTIAL BODIES THEMSELVES

Descriptions of "dancing" celestial bodies bring up the question of which concrete observations might have inspired the idea that these bodies are "dancing". Hence, this passage pays attention to the different celestial bodies and to the specifics which might fuel the impression of their "dance".

1.1. The dance of the stars and of celestial bodies in general

The idea that the celestial bodies are performing a cosmic dance is well-documented, e.g. in classical antiquity (Miller, 1986). The vault of the sky was labelled as the dance floor of the stars (Gundel, 1968: 79) and many authors, when generalizing, referred to the rotation of the celestial sphere as a dance, e.g. Euripides (5th century BCE): "… Zeus' star-eyed sky has begun its choral dance …" (Euripides, Ion, cited in Miller, 1986: 34). Plato (428-348 BCE) emphasized the uniqueness of this dance: "… the stars … dance the fairest and most magnificent procession and choral dance of all the choruses in the world and accomplish whatever is needed for all living creatures" (Epinomis 982e, cited in Miller, 1986: 41). While in such generalizing examples it is not evident whether the idea of "dancing" stars referred only to the movement of the circumpolar stars or was also inspired by the regular and structured movements of the stars in general, Apuleius (2nd century CE) explicitly labelled the rising and setting of stars as a dance: "one choral dance of stars arising from their diverse risings and settings" (Apuleius, De mundo XXIX.335, cited in Miller, 1986: 89). Other authors referred not only to the stars but to the different celestial bodies and their interactions, e.g. changing their positions relative to each other: "the choral dance of the stars ..., the interweaving of the planets with the fixed stars, their rhythmic partnership and well-ordered harmony ..." (Lucian of Samosata, The Pantomime 7, cited in Miller, 1986, 188). "The eye looked up to the region of the ether and beheld the sun and moon and the planets and fixed stars …; then it saw their risings and settings, their harmonious choral dances ..., their conjunctions at periodic intervals, their eclipses, their reappearances …" (Philo, The Special Laws III 187-8, cited in Miller, 1986: 60)

1.2. The dancing sun

The most prominent "dancing" celestial body is the sun, looked upon as the leader of the dance in the choral dance of the celestial bodies (Gregory of Nazianzus, *Oratio teologica* II XXIX; Or 28.29, cited in Miller, 1986: 353). For the South American Desana, the sun itself took on the role of a dancing teacher who shows "how the dances should be done ..." (Reichel-Dolmatoff, 1974: 36).

A special dance is performed by the sun, according to traditions widespread across Europe: the sun dances close to the time of the summer- or winter-solstice, on Shrove Tuesday, Easter or Pentecost (Vaiskunas, 2003: 37; Kuhn, 1859: 411f.; Rohmann, 2013: 539). Vaiskunas (2003: 35) reports on such dances related to the summer-solstice: "The sun dances … on 29 June and jumps back …, and the days get shorter". The apparent standstill of the sun at the solstice and its setting in motion anew may give a plausible background to the idea of a "dance" of the sun. This impression may have been intensified by the fact that in northern latitudes the angle of the rising sun to the horizon is narrower than it is in latitudes closer to the equator. Hence disturbances of the atmosphere may longer influence the visibility of the rising sun, its altitude and its azimuth. Dependent on weather conditions an observer may get the impression that the rising sun does not "stand still" at the solstices for a few days, but is slightly dancing (Vaiskunas, 2003: 36). The connection of the dancing sun with June 15, St. Vitus' day, may also be explained by the solstice: Due to the inadequate leap year rules of the Julian calendar, the observation of the solstices gradually shifted for several days, and for some time in the medieval era the solstice was observed on St. Vitus' day (Rohmann, 2013: 538). The sun is also said to dance on dates like Easter or Shrove Tuesday. In these cases the solstices are ineligible as an explanation for the idea of a dancing sun. Many reports suggest that the alleged dance of the sun at Easter has a symbolic meaning to the effect that the sun is happy about the resurrection of Christ and therefore dances for joy (Kuhn, 1859: 412; Rohmann, 2013: 179). But sometimes instructions are provided for how to watch

the phenomenon of the "dancing" sun. A number of simple tools for ensuring safe observation are mentioned: watching the sun's reflection on the calm surface of a fountain or on the surface of a water-filled bowl, using paper which has been pierced by needles (Kuhn, 1859: 411f.), or watching "through a silk scarf …" (Vaiskunas, 2003: 37). These instructions suggest that the dance of the sun at a date other than the solstices was not only meant allegorically, but was related to a concrete natural phenomenon, maybe some special weather conditions. Another "dance" of the sun may be easily explicable by such a factor: Some German weather lore says that severe cold will follow if you see the sun "dancing" in winter (Stegemann, 2005: 46) Most probably, special weather conditions, such as scintillation of the air, underlie this impression of a "dancing" sun.

1.3. The dancing Moon

As matters stand, examples of the "dancing" moon are only found in texts from classical Antiquity. Apuleius briefly mentioned the Moon as a member of the dancing celestial chorus (Apuleis, *Peri kosmou* VI, 399a, cited in Miller, 1986: 254). Euripides says: "… Zeus' star-eyed sky has begun its choral dance. And the moon is dancing ..." (Euripides, Ion, cited in Miller, 1986: 34) While the idea of the dancing sun is widespread and explicitly expressed, the idea of the dancing Moon seems to be strikingly rare, a fact which I cannot explain at this stage and which will perhaps change in the course of further investigation of ethnographic literature.

1.4. The dancing planets

The planets are often mentioned in a generalised way: Philo e.g. refers to "… the choral dances of the planets …" (On the Creation 70, cited in Miller, 1986: 56). Plato's (428-348 BCE) famous remarks pointing to the complex paths of the planets, including apparent looping, are much more informative for the origin of the idea that the planets are dancing: "To describe the choral dance of these same gods ..., their juxtapositions and their retrogradations and their progressions, or to say which of these gods meet in conjunction and which in opposition ..." (Timaios 40d, cited in Miller, 1986: 19). Following in the steps of Plato, Proclus (412-484 AD) dedicated elaborate thoughts to the dance of the planets in his commentary on Plato's "Timaeos". He interpreted the different velocities of the planets and the apparent looping and spiralling of their paths as the complex pattern of a dance (Miller, 1986: 453-465).

1.5. Dancing constellations

Among the constellations, the Pleiades have repeatedly been associated with dance. Many North American myths describe the Pleiades as a group of dancing girls or boys who rise to the sky (Lankford, 2007: 166-181). Their rising to the sky and dancing is closely related to the seasons, for instance in an example from the North American Caddo natives: Seven brothers were scolded by their mother for playing all day and avoiding work. Angrily the boys danced into the sky and became the Seven Stars. This aetiological story explains why the Pleiades can be seen during the winter, while these "lazy boys" disappear at the beginning of spring, when the period of intense work starts again (Lankford, 2007: 173). In this case the seasonal visibility of the constellation has apparently inspired the idea of a dance. The same may be true for the belt and scabbard stars of Orion, which were interpreted as dancers by the Australian Boorong (Morieson, 2004: 5) The constellation Corona Borealis, however, viewed in the traditions of Shawnee natives as a group of dancing maidens, probably was associated with dance because of its shape, which may evoke the impression of a round dance (Olcott, 1911: 151).

1.6. Aurora borealis as dancers

It is hardly surprising that the moving Aurora borealis has, by Northern people, repeatedly been interpreted as a dance, be it the dance of human or animal spirits or the dance of gods (Solheim, 2005: 170f.). Very profanely, in parts of Sweden the

Northern light "was simply called 'polka'" (Solheim, 2005: 170ff.).

The idea that celestial bodies dance is therefore due to different observable factors: the rotation of the celestial sphere, the rising and setting of stars, the apparent looping of the planets, weather conditions, the seasonal visibility of constellations, the shape of constellations, etc.

2. COSMIC DANCES OF HUMANS

Human dances may take on a cosmic meaning in different manners.

a) Dance figures may *imitate movements of celestial bodies*, e.g. the rotation of the celestial sphere or the movement of the sun. Such imitations may vary between relatively concrete or very stylized forms. The Medieval theologian Honorius Augustodunensis (1080-1137) reported the following about dances of the "pagans": "… through the circling, they understood the revolution of the firmament; through the joining of hands, the interconnection of the elements; through the gestures of bodies, the motions of the signs or planets; through the melodies of singers, the harmonies of the planets ..." (Hon. Augustod. Gemma animae I,139)

The practice of labyrinth-dances has been transmitted from medieval times and has been argued to have astronomical connotations. Many Gothic cathedrals had floor labyrinths of the so-called "Chartres"-type, a "unicursal maze of circular or less frequently octagonal shape" (Eisenberg, 2009).

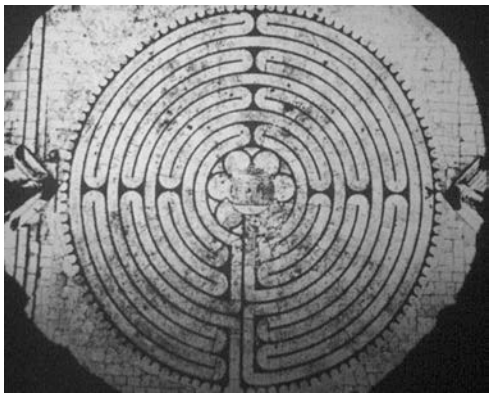

Fig. 1 Cathedral of Chartres (France): Labyrinth, 13th c. Photo: Rappenglück.

Medieval documents report rituals or dances performed in these labyrinths. The hypothesised astronomical meaning of these dances has on the one hand been deduced from the alleged similarity of the maze's shape and the path of celestial bodies: either the path of the moon (Ferré, cited by Eisenberg, 2009), the path of the planets (refuted by Kern, [4]1999: 32, 40f.), or the path of the sun (e.g. Wirth, 1936: 240, refuted by Kern, [4]1999: 32, 41). Kern ([4]1999: 32, 40f.) has convincingly pointed out the deficiencies of these different ascriptions.

The hypothesised astronomical meaning of some labyrinth dances has not only been based on the shape of the labyrinth but also on a special version of these dances, the so-called *pilota* celebration. This liturgical rite was performed in the cathedral of Auxerre over a floor labyrinth on Easter Monday. Clerics performed a ritualized dance while tossing a ball, the *pilota*, and singing. The exact details of the performance are not transmitted, leaving room for various interpretations. While the discussion concerning astronomical meanings of medieval Church labyrinth-dances is very controversial (Kern, [4]1999; Wright, 2004; Eisenberg, 2009), a text from the 4th century AD definitely ascribed astronomical aspects to the labyrinth-like dance *Geranos,* a dance in ancient traditions connected with the Greek hero Theseus and his companions. Marius Victorinus, a Roman author, had interpreted that dance as an imitation of celestial movements: "first they danced a step to the right, as the sky turns to the right from East to West; then they danced back to the left, as the sun, the Moon and the other wandering stars speed leftwards from West to East; third they were chanting while standing, because the Earth being orbited by the sky stands immovably in the midst of the cosmos" (Marius Victorinus, 4th c. AD, Ars grammatica 1,16). At least this text gives evidence that some heavenly movements were understood to be very generalized models of earthly maze dances.

Some centuries later the imitation of cosmic movements by dance took shape in a very profane manner. In the "Ballet royal

de la Nuit" of Jean-Baptiste Lully, the French king Louis XIV (1638-1715) took the part of the sun and the other dancers revolved around him like the planets. The immovable object at the centre of the dance was not any more the Earth, as in the text of Marius Victorinus, but the sun, hereby illustrating the change in the worldview.

Cosmic dances might not only imitate the rotation of the celestial sphere and the paths of the planets around a centre, but also mime constellations. Based on detailed argumentation it has been suggested that the three dancing maidens of the acanthus column at Delphi can be identified as the constellation Hyades (Ferrari, 2008: 127-150), closely "related to the seasonal movements of Apollo" and thus characterising the column as "the representation of a cosmic landmark" (Ferrari, 2008: 146). In Chinese Daoism the Big Dipper is in the focus of an at least 2000-year-old practice called "The pacing of the Big Dipper" (Andersen, 1989-1990). The stars of the constellation Big Dipper are connected in a pattern of steps. These steps may be re-enacted either purely mentally or as a kind of dance. It is the purpose of this practice to activate the correlation of body and soul with the cosmic power and harmony which, according to Daoism, are manifested in the Big Dipper. The correct realization of the steps originally required astronomical observations. The actual position of the Dipper had to be ascertained to calculate the correct date and time for the ritual, which would guarantee the optimal concordance between "the forces of man and heaven" (Andersen, 1989-1990: 37). Hence this ritual is also an example for the next point, that:

b) dances may be related to *a special date*, e. g. the solstices, the equinoxes or special positions of certain constellations. Bulgarian dance tradition provides another good example: In Bulgaria dances are transmitted which reproduce the "visible movement of the sun". Around the winter solstice the sun's course is re-enacted "with the quicksteps, leaps, and change of direction … while in the spring … (the) steps are calm and broad." (Koleva, 2003: 42f.)

c) Similar to special dates, the *spatial orientation* of dancing may essentially contribute to a cosmic meaning of a dance. In old China dances were performed to embody the Nine Provinces of the World and the eight cardinal directions (Granet, 1980: 219). The Okipa ceremony of the North American Mandan was shaped by a complex temporal and spatial cosmic symbolism: it was performed around the summer-solstice, the house for the ritual represented the universe, the participants of the ritual arranged themselves with reference to the cardinal directions, and dances had a close relation to the cardinal points as well as to special times of the day etc. (Müller, 1970: 309-315).

d) *Requisites* may provide a dance with a cosmic meaning, e.g. the costume of a dancer, or some accessories or objects which are used in the course of the dance. For example, during the just mentioned ritual of the Mandan natives, dancers who were qualified by their body-painting as personifications of Day and Night entered the stage (Müller, 1970: 313 fig. 52). In a similar way dancers from Java are marked as sun and Moon by their costumes (Wosien, 1974: 103 fig. 14). Drums often accompany a dance, and their decorations may underline its cosmic meaning: Shaman's drums, decorated with the world-tree that connects the different levels of the cosmos and with the symbols of sun and Moon, draw on cosmic symbolism (Rappenglück, 1999: 261-264). Another widespread requisite is a pole around which a dance is performed. Many traditions interpret the circumpolar stars to be animals tied to the pole by long ropes (Rappenglück, 2003: 89). Often the dancers are likewise connected to the pole by ropes and circle around this axis like the stars around the celestial pole. A somewhat different cosmic meaning of performances around an axis is identifiable in detail in the traditional Voladores dances still practised in Mexico.

Fig. 2 Voladores (Mexico). Photo: Frank C. Müller (Wikimedia Commons).

A pole is erected with a small revolving platform fitted to the top, and four ropes are wound around the pole from top to bottom. A musician with a flute and a drum stands on the platform while four men, dressed as eagles, enter the platform and tie the ropes around themselves. They then jump down from the platform, unwinding the ropes as they fall. "Traditionally each makes thirteen revolutions around the pole, their total flights symbolizing the four epochs of thirteen years each which made up the ancient Aztec time cycle of fifty-two-years" (Waters, 1975: 196).

Human dances get a cosmic meaning by different elements: the – mostly very generalized – imitation of the movements of celestial bodies, the performance of dances at astronomical significant dates, and spatial arrangements of dances according to important astronomical spatial elements. Being structured this way, the three basic parameters of dance – body, space and time – are deliberately shaped to refer to relevant astronomical factors. Together with appropriate requisites of dance, which have a cosmic symbolism, they can be used and organized in such a way that a dance gets a cosmic meaning.

In addition to the cosmic dances of celestial bodies and human beings, a third fundamental category of "cosmic dances" became obvious in the course of research:

3. CREATION AND RENEWAL OF THE PRIMORDIAL COSMIC ORDER BY DANCE

According to ancient myths dance has a creative power: Australian Aborigines from Queensland ascribe the origin of the Milky Way to a combination of music and dance. They say that stars induced by the music of an Orpheus-like musician started to dance, and arranged themselves as the Milky Way (Haynes, 1990: 202). Other traditions accredit the creation of the whole cosmos to the power of dance. In Iroquois mythology Sky Woman dances on the back of a turtle that is swimming in the primeval ocean and has mud from the seafloor on its back. Through the singing and dancing of Sky Woman both the mud and the turtle expand and become the Earth (Venables, 2010: 25). The Californian Gabrielino-Tongva natives also ascribe creative power to dancing and singing: In the Beginning a primeval force without form and gender created Sky Father by singing and dancing. In the same manner the primeval force and Sky Father together then called Earth Mother into existence. Grandfather sun, Grandmother Moon, the goddess of the sea etc. were then created by the singing and dancing of all gods already existing at the time (RayBourn, 2010, 66).

The most prominent "cosmic dancer" is the Hindu god Shiva in its manifestation as Shiva Nataraja, the "Lord of Dance" (Keilhauer, 1983: 144). In Hindu cosmovision the world is subject to cycles of destruction and renewal. Shiva's dance transmits the power of transformation between the disintegration of the world and its new emergence.

His postures, gestures and attributes symbolize the phases of creation, preservation and destruction of the world. From Shiva's drum the creation arises: his shape symbolizes the preservation of the world; the fire in his upper left hand signifies destruction; the gnomish demon under Shi-

va's feet symbolizes the clinging to negative features which prevent living beings to escape from the circle of reincarnation; the corona of flames represents spiritual salvation (Keilhauer, 1983: 144).

Fig. 3 Shiva Nataraja (India). Photo: Rappenglück.

A "cosmic dancer" is also known in Western philosophy. Plotin (205-270 AD), a prominent proponent of the Neoplatonic tradition, in his work Enneads (4.4.33) "compared the cosmos to a dancer; modifications in the structure of the cosmos to changes in the arrangement of a dancer's body; and configurations of stars to particular gestures of the dancer" (Copenhaver, 1986: 364). Such ideas were even adapted in the Renaissance period. Marsilius Ficino (1433-1499), who had a deep interest in magic, when commenting on Plotin considered the insight into the regularities of the cosmic dance as an essential source of magic power (Copenhaver, 1986: 364-367).

The participation in cosmic forces and the renewal, reassurance and stabilization of the primordial cosmic order is an objective of many rituals worldwide (Eliade, 1986: 447-470), and dances have an important significance in such contexts. The already mentioned Okipa ceremony of the Mandan is a relevant illustration. Tibetan ritual dances present another impressive example: "The preparatory action or ritual dance initiates what we could call a temporary 'place-creation' in terms of a recreation of the cosmological spheres at a particular site" (Schrempf, 1999: 199). Movements and gestures in combination with music and ritual objects address the different directions and spheres of the cosmos (for the very complex details (see Schrempf, 1999). In this way a protected microcosmos is created which ensures a secure realization of the rituals that follow.

CONCLUSIONS

Human concepts of "cosmic" dances have on the one hand been triggered by concrete astronomical and physical observations: the rotation of the stars around the pole, the course of the sun, the apparent looping of the planets, the seasonal visibility and invisibility of constellations, the shape of constellations, or atmospheric conditions. The observation of these cosmic regularities has inspired the idea of heavenly bodies and phenomena as celestial dancers.

On the other hand ideas of ancient cultures concerning close relations between the human body and the cosmos have substantially contributed to the idea of "cosmic" dances: According to these ideas parts of the human body and celestial bodies or celestial phenomena correspond to each other, and correlations exist between bodily and celestial rhythms. Based on this, it was consistent to interpret the regular movements of the celestial bodies as dances and to become convinced that humans can imitate and even participate in this cosmic dance. The bodily and spiritual well-being of humans as individuals and also as a social community was interpreted as depending on the undisturbed participation in the cosmic regularities. Such linkages have been expressed, for example by the German polymath Agrippa von Nettesheim (1486-1535): "Someone who is ill is no longer in accordance with the universe. But he can recover the harmony and his health, if he brings his movements into accord

with the celestial bodies" (cited [in German; translated into English by B. Rappenglück] in Wosien, 1988: 48). Hence, reproducing the cosmic structures could serve to activate their power and to manipulate or to stabilize their effects. Dance as a temporally and spatially organized, rhythmic pattern of bodily movement is a cultural expression especially prone to reenact the structured cosmic movements.

The forces activated by dance are so highly esteemed by some traditions that they even perceive dance to be the fundamental action of creation. Renewal, reassurance and stabilization of the primordial cosmic order is addressed in many dances which refer to the cardinal directions, the world-axis and/or essential seasonal markers.

Even nowadays the comparison of fundamental processes in the universe with dance is still used. In 2013 the news website "Science Daily" headlined: "Dance of the Atoms: Clustering of Atoms Observed" (Vienna University of Technology, 2013). Maybe the Roman emperor Julian Apostata (331-363) was right with his remark: "… the dance … came into existence along with the universe and sprang from the same great and primordial source as the heaven" (Julian, Oratio LXIV.12, cited in Miller, 1986: 303).

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