

The Iconography of Dürer’s “Knots” and Leonardo’s “Concatenation”*

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“La forma universal di questo nodo credo ch’io vidi”—Dante
Paradiso XXXIII.91.

Λύειν δ’ἔστιν ἀγνοοῦντας τὸν δεσμόν—Aristotle
Metaphysics III.1.2.

Among Albrecht Dürer’s wood-engravings is the series of *Sechs Knoten*; the design (Fig. 1) fills a circle and consists of a very complicated unbroken white line pattern on a black ground; the main pattern is echoed in four small corner pieces and in several cases Dürer’s own name is engraved in the central dark circle from which the main design expands.¹ The usual view is acceptable, that Dürer’s *Knots* are variations of a well-known engraving on copper of a similar medallion (Fig. 2), the design of which is commonly attributed to Leonardo da Vinci, and in the center of which there appear the words *Academia Leonardi Vinci*. Goldscheider² sees in this “fantasia del vinci” probably a “hieroglyphic signature,” and he quotes Vasari, who says that “he [Leonardo] spent much time in making a regular design of a series of knots so that the cord may be traced from one end to the other, the whole filling a round space. There is a fine engraving of this most difficult design, and in the middle are the words *Leonardus Vinci Academia*.” Goldscheider remarks that there is “a play on the words *vincire* (to fetter, to lace, to

* [This essay originally appeared in the *The Art Quarterly*, Detroit, VII. 2, Spring 1944, pp.109-28. A French translation was published in *La Règle d’Abraham*, Reims, December 2000, pp.61-99. Republished here by kind permission of the estate of Ananda K. Coomaraswamy. A debt of gratitude is due to Mr. James S. Crouch who significantly aided in the preparation.]

¹ Valentin Scherer, *Dürer* (3rd ed.), *Klassiker der Kunst*. The *Sechs Knoten* are reproduced on pls. 223-225.

² G. Goldscheider, *Leonardo da Vinci the Artist*, Oxford, 1943, pp.6, 7 and Fig.5 (in the present article, Fig.2).

knot) and Vinci,” and rather naïvely adds that interlacing patterns were not invented for the first time by Leonardo.

A. M. Hind³ says that “the prints were probably engraved by Leonardo with the definite aim of serving as patterns of a kind of decorative puzzle for artists of various crafts. Instances of similar knot design occur throughout Leonardo’s Mss. ... The connection of Vinci, the town of his birth, with *vinco* (willow, osier) which would be commonly used for plaiting baskets and the like in various interlaced patterns may have suggested the device, and some by-play to *vinci* in the sense of *vincoli* (bonds or fetters) may have been intended. The latter sense falls into line with the title of ‘Knoten’ (or Knots) given by Dürer himself to six woodcuts which he made after the present series.” Mr. Hind also observes that amongst Dürer’s variations is “the inner line used in representing the ‘cords,’ making them more closely resemble metal.”

G. d’Adda⁴ says that Dürer’s *Knots* have been called embroidery designs, but are really lace patterns (“veritable patrons de passementerie”); in any case *Knoten* suggests a textile application. The designs have also been called “dedali” or “labyrinths”; but in d’Adda’s view this is inexact, because here the lines both touch and are superposed on one another, which is not the case in true labyrinths. Amongst other books d’Adda cites in his Bibliography is one by Balthazar Sylvius (Du Bois), published in 1554 and entitled (in Latin): *A Little Book of Geometrical-Designs, commonly termed ‘Moorish’ ... very useful to Painters, Goldsmiths, Weavers, Damasceners ... and also to Needle-workers*. From all this it is clear that it must have seemed to Dürer’s contemporaries that his *Knots* were such as could be employed in a great variety of techniques; and that their likeness to Moorish arabesques was generally recognized.

There is more to be said for the designations “dedalus” and “labyrinth” than d’Adda supposed. It is true that in what he calls the “true labyrinth” the lines are never superposed; but that is inevitable, because the old constructed labyrinths are laid out on plane surfaces so as to form a “maze” through which one can actually walk until the

³ A. M. Hind, *Catalogue of Early Italian Engraving in the British Museum*, 1910, p.405.

⁴ G. d’Adda, “Essai bibliographique des anciens modèles de lingerie, dentelles et tapisseries,” *Gazette des Beaux-Arts*, XVII (1864), 434 ff; also the same author’s “Leonardo da Vinci, la gravure milanaise et passavant,” *ibid.*, XXV (1868), II, 123.

center is reached, while the representations, whether rock carvings or drawings, are merely replicas of the constructed forms. These constructed forms are of great antiquity; they may be referred to a Megalithic culture, and occur as stone alinements in Finland and Sweden.⁵ The famous medieval examples are inlaid on cathedral floors; there were examples at Amiens, St. Quentin, and Rheims; and of those still existing, the most notable is that of Chartres (Fig. 3), with a pathway some six hundred and fifty feet in length, leading round and about until the center is reached. In Hahnloser's words, "Gleichzeitig mit de Ruhme des Dädalus erhebt die Gotik auch seinen 'Grundriss,' die durchbrochene Spirale, zu symbolischer Deutung." W. R. Lethaby quotes Didron, who says that "the whole device was deemed to be indicative of the complicated folds of sin by which man is surrounded, and how impossible it would be to extricate himself from them except through the assisting hand of Providence." In the case of a labyrinth at St. Omer, temples, animals and towns were depicted on the pathway and the Temple of Jerusalem in the center. Lethaby says that the French labyrinths "appear to have been called la lieue or Chemin de Jerusalem; they were placed at the west end of the nave and people made a pilgrimage on their knees, following the pathway to the center, which is said to have been called Sancta Ecclesia or Ciel."⁶ Of numerous English examples cut in turf it is of great interest that one is called by the name of "Troy Town."⁷ The Italian examples of pavement labyrinths at Ravenna, Rome, Pavia, etc., are descendants, through Roman pavements (Fig. 4) and gems, from the representations of the labyrinth of Dedalus which occur on Cretan coins. The motive survives in Oriental Folk Art (Fig. 5). Villard de Honnecourt's drawing⁸ is identical with the labyrinth that appears on the Hereford map of Crete, inscribed Labarintus id est domus Dealli; and the one at Amiens was inscribed Maison de Dedalus. At Pavia the Minotaur is represented at the vortex in the form of a

⁵ Illustrations of these and other early labyrinths will be found in C. N. Deedes, "The Labyrinth"; in S. H. Hooke (editor), *The Labyrinth*, London and New York, 1935; W. H. Matthews, *Mazes and Labyrinths*, London, 1922.

⁶ W. R. Lethaby, *Architecture, Mysticism and Myth*, London, 1892, Ch.VII. See also Fr. M. Th. Böhl, "Zum babylonische Ursprung des Labyrinths," *Anecdota Orientalia*, XXII, 1935, 6-23.

⁷ The equation of "Troy" with "labyrinth" is discussed by Deedes, *loc. cit.*, pp.34-41, and by W. F. J. Knight, *Cumaeen Gates*, Oxford, 1936, Chs.V-VII.

⁸ H. R. Hahnloser, *Villard de Honnecourt*, Wien, 1935, p.38 and pl.14 g.

centaur. As Lethaby remarks, the exact form of the original designs is preserved throughout the Middle Ages, but “when the root of tradition was broken away from at the Renaissance, all this was altered, and mazes became inventions, every one different from the others—spiders’ webs⁹ of enticing false paths.” We reproduce here one late form, interesting because the center is occupied by a high tower with a spiral stairway and surmounted by a statue (Fig. 6); whoever ascended this tower would be able to look down upon the maze through which he had already passed, taking in the whole at one glance.

We have discussed the “dedali and labyrinths” at some length in order to show that it is their tradition that really survives in Leonardo’s and Dürer’s *Knots*. The best evidence for this is to be found in the fact that while the names of Leonardo and Dürer are inscribed in the centers of their designs, at Amiens the center of the labyrinth was occupied by an effigy of the architect of the cathedral, and similarly in some other instances identified by inscriptions. This implies as Hahnloser says, an apotheosis of the architect, by assimilation to Daedalus, the original constructor and the only mythical architect whose name was familiar to the builders of the Middle Ages. There can be little doubt that the octagonal form of the pedestal of which the traces remain at Chartres, bore the significance of a regeneration as in the case of fonts. In any case the affiliation and analogy of the knots to labyrinths is clearly established by the placing of their authors’ names or images at the center.

That the lines of the *Knots* are superposed and intersect involves no difference in principle, but represents a translation of the idea of the maze into three-dimensional and textile terms. The significance of Leonardo’s “decorative puzzle”—which, from an Oriental viewpoint

⁹ The mention of spider’s webs is strictly appropriate, for the Sun is the primordial spinner moving along the threads he spins (*Śatapatha Brāhmaṇa* XIV.2.2.22), and often explicitly likened to a spider (see references in *JAOS*, 55, 1935, pp.397-8) who “makes his net with a single thread” (*Brahma Upaniṣad* 1), and “wise is he who layeth hold upon it” (*ibid.*, 3). There is more in the words, “Come into my parlor, said the spider to the fly,” than catches the ear. The remarkable perfection of the “spider” symbolism extends to the fact that the radii (warp, threads) of the web are not sticky, while the spiral (woof) is adhesive; the spider himself walks only on the radii while the flies are caught on the sticky threads. For the “moral” of this tackiness see my “Note on the Stickfast Motif” in *Folklore*, LVII (1944), pp.128-131: “sense-experience depends on contact, and he who touches may be caught.”

must be called a *maṇḍala*—will only be realized if it is regarded as the plane projection of a construction upon which we are looking down from above. So seen, the pattern breaks up into three parts, that of the dark ground of the earth (with angle ornaments indicative of the four directions), that of a knotted tissue that broadens out below and is contracted above, and that of a center and summit that would be white if one were looking at it from below but in the figure itself is dark because the dark ground shows through it.

Leonardo's concatenation is a map of the universe in the precise terms of Dante's lines:

Co-created was order and inwrought with the substances; and
those were the summit in the universe wherein pure act was
produced:

Pure potentiality held the lowest place; and in the midst
potentiality with act strung such a withy as shall never be unwound

("strinse ... tal vime, che giammai non si divima," *Paradiso* XXIX.31-6), where the metaphor (of basket-work) is of just that technique which A. M. Hind quite independently suggests as the probable source of Leonardo's design. Almost identical with Dante's are the terms in which the Indian sacrificer imitates the Preparation of the Three Worlds for inhabitation, viz., "as a man throws (Webster, sense 2, twists or braids) strand upon strand (*guṇe guṇam*), even so he throws world upon world, for firmness and that there may be no slackening" (*Taittirīya Saṁhitā* VII. 2.4.2). *Guṇa*, "strand," or "thread," is also "quality" or "virtue," notably with reference to the "three worlds," terrestrial, atmospheric and celestial, mentioned above, and of which the "qualities" are respectively dark-potential (*tāmasik*), variegated-activated (*rājasik*) and white-essential (*sāttvik*).

Nor must we overlook that other line of Dante's in which he speaks of God "who draws the earth and unites it to himself" ("questi la terra in se stringe ed adune," *Paradiso* I.117) or that in which he speaks of seeing all at once "the universal form of this knot" ("nodo," *Paradiso*

XXXIII.91), which “if our fingers are unable to unravel, it is from long neglect (*ibid.*, XXVIII.58-60).¹⁰

Leonardo’s *Concatenation* is a geometrical realization of this “universal form.” He must have known Dante, and could have taken from him the suggestion for his cryptogram. But there is every reason to believe that Leonardo, like so many other Renaissance scholars, was versed in the Neo-Platonic esoteric tradition, and that he may have been an initiate, familiar with the “mysteries” of the crafts.¹¹ It is much more likely, then, that Dante and Leonardo both are making use of the old and traditional symbolism of weaving and embroidery. In connection with the traces of this tradition in Swiss folk art Titus Burckhardt remarks: “Ornaments in the form of a knot, which are widely distributed in nomad art, comprise an especially suggestive symbolism, based on the fact that the different parts of the knot are opposed to one another, at the same time that they are united by the continuity of the string. The knot resolves for whoever understands the principle of

¹⁰ Special senses of *nodo* include *nodo di Salomone* “a design showing a knot without any ends in the cords being visible,” *nodo* as “string (of pearls),” and *nodi della vita*, “ties of the soul to the body” (Hoare’s Italian Dictionary). Wicksteed and Oelsner render *nodo* by “complex,” and that is just what a “knot” is. “Universal form”: for, “indeed, this All is held together by invisible powers, which the Craftsman has extended (*apâteine*) from the ends of the earth even unto the sky, taking wise forethought that the things bound (*dethénta*) and pendent, as it were, from a chain (*seirá*), should not be loosed; for the powers of the All are bonds (*desmoí*) that cannot be broken” (Philo, *Migr.* 181 with 167). Here things are thought of (in 167) as if pendent from a garland or necklace, to which they are secured, and to fall away from which would be their death. It is in this sense that in India the death of the individual is described as a being “cut off”; and in the same way in China, “the ancients described death as the loosening of the cord on which God suspended their life” (Chuang Tzu III.4). Similarly at the dissolution of the universe, the “wind cords” are severed (*Maitri Upaniṣad* I.4), cf. *JRAS*, 1942, p.230, note 6 and 1943, p.107, note 1; these “wind cords” are likewise those to which Rūmī refers as “cords of causation” (*Mathnawī* I.647).

¹¹ Cf. René Guénon, *L’Esotérisme de Dante*, Paris, 1925; J. H. Probst-Biraben, “Léonardo de Vinci, Initié,” *Le Voile d’Isis*, 38, 1933, pp.260-266; “Symbolisme des arts plastiques de l’occident et due proche orient,” *ibid.*, 40, 1935, pp.160-173 (p.171, “Les génies de la Renaissance étaient à la fois initiés aux rites et symboles des Fraternités orientales et occidentales, procédant de la Qabbale et di Soufisme, aussi bien du Pythagorisme, due Platonisme et de l’Alexandrinisme, qui sont en gros identiques, cöincident et se succèdent par des transitions insensibles”); Paul Vulliaud, *La pensée ésotérique de Leonardo da Vinci*, Paris, 1910.

knotting of which the invention is, so to say, itself a symbol of the hidden principles of things.”¹²

Dante's *questi la terra in se stringe* goes back through intermediate sources (cf. John 12:32) to Plato's "golden cord" (*Laws*, 644) that we ought by all means to hold on to if we would be rightly governed, and not distracted by the pulls of contrary passions; and so to Homer's "golden chain" (*Iliad* 8.18 ff.) with which Zeus could draw all things to himself and in which Plato (*Theatetus*, 153) rightly saw a solar power. It is related, too, that when Zeus was ordering all things, he consulted Night, and asked her "how all things might be both one and divided, he was bidden wrap aether around the world and tie up the bundle with the 'golden cord'." ¹³ It is in almost the same words that Marsilio Ficino (whom Leonardo must have known) says that "as in us the spirit is the bond of Soul and body, so the light is the bond of the universe (*vinculum universi*)." ¹⁴ The clew survives in William Blake's:

I give you the end of a golden string,
Only wind it into a ball,
It will lead you in at Heaven's Gate
Built in Jerusalem's wall.

Sylvius' words, "quas vulgo Maurusias vocant," cited above (in translation), not only remind us that our "knots" are, so to speak "arabesques," ¹⁵ but also that the symbolism of the thread of life

¹² In *Schweizer Volkskunst; Art Populaire Suisse*, Basle, 1941, p.85, cf. pp.94-96. In the same volume will be found some good examples of calligraphic ornaments in "one-line technique." Cf. René Guénon, "Le symbolisme du tissage," *Le Voile d'Isis*, XXXV (1930), pp.65-70.

¹³ The words are A. B. Cook's in *Zeus*, II, 1029, based on the Orphic Fragment, Niels 165, and other sources.

¹⁴ *Op. Om.* p.981, cited by P. O. Kristeller, *The Philosophy of Marsilio Ficino*, 1943, p.116.

¹⁵ "L'arabesque, ce poème linéaire où la géométrie, la musique et l'écriture se rejoignent, est une synthèse métaphysique ... L'arabesque offre ainsi un passage incomparable du point de vue spatial au point de vue temporel ... De même que le *dhikr*, discipline d'incantation, l'arabesque entraîne celui que l'éprouve sur le chemin de retour vers Allah." (Elie Lebasquais in *Le Voile d'Isis*, 40, 1935, p. 281. Luc Benoist, *Art du monde*, 3rd ed. 1941, pp.178-9.) Cf. E. Diez, "A Stylistic Analysis of Islamic Art," *Ars Islamica*, V (1938), 36-45: "Islamic art is the art which expresses submission to [I would say, dependence upon] Allah ... Islamic art appears as the individuation of its metaphysical basis (*unendlichen Grund*) ... The construction of the linear configurations

(familiar, too, in connection with the Greek Moirai and Scandinavian Norns) recurs in Islamic contexts; analogous to Blake's, for example are Rūmī's lines:

He gave me the end of a thread—a thread full
of mischief and guile—
“Pull,” he said, “that I may pull; and break it
not in the pulling.”¹⁶

Indian sources for the symbolism of sewing and weaving and the corresponding “thread-spirit” (*sūtrātman*) doctrine are even more abundant and explicit. William Crooke records that “at a place in Gilgit there is said to be a golden chain hanging down to earth from the sky. Any persons suspected of wrong-doing or falsehood were taken to the place and forced to hold the chain while they swore that they were innocent or that their statements were true,” and as he adds “this suggests the Homeric reference (*Iliad* 8.18 ff.), and the *Aurea Catena Homeri*, which was handed down through the Neo-Platonists to the alchemists of the Middle Ages.”¹⁷

This is a remarkable parallel, but one from which no argument for an “influence” could be deduced. For to go back to the eighth century B.C. (and still earlier texts could be cited), we are told that “the Sun is the fastening to which these worlds are linked by means of the quarters. ... He strings (*samāvayate*, √ *ve*, ‘weave,’ ‘braid,’ ‘string,’ present also in ‘web’ and It. *vinci*, *vime*) these worlds to himself by means of a thread (*sūtra*, √ *siv*, ‘sew’), the thread of the Gale (*vāyu*).¹⁸ Verily, he who knows that thread, and the Inner Controller who from within controls this and the other world and all beings, he knows Brahma, he knows the

is ... insoluble for the spectator's eye, and thus elevated above the limits of normal human reason into the sphere of divine inscrutability. These nets of lines and formulas, though thought out by human intellect, signify to a certain degree an outwitting and a supernatural surpassing of the human limits of reason. The best confirmation for the categorization of Islamic art as being polar-ornamentalistic is the Persian denotation of a rug pattern as *zemān* (‘time’), and of the ground as *zemīn* (‘space’).” In connection with the further statement, “every single figure of any ornamental design ... has a concrete mystic and symbolic significance,” Diez cites J. Karabeczek, *Die persische Nadelmalerei Susandjird*, Leipzig, 1881, pp.137-67.

¹⁶ R. A. Nicholson, *Odes of Shams-i-Tabriz*, Cambridge, 1898, no. 28.

¹⁷ In *Folklore*, XXV (1914), p.397.

¹⁸ *Śatapatha Brāhmaṇa* VI.7.1.17 and VIII.7.3.10.

Gods, the Vedas, Being, Self, and everything”;¹⁹ for “by the Breath (Life) he connects (*saṃtanoti*, √ *tan*, Gk. *teíno*) these worlds.”²⁰ Better known is the text of the *Bhagavad Gītā* VII.7: “All this universe is strung (*protam*, √ *ve* as before) on Me, like rows of gems on thread” (*sūtra*).

From the standpoint of the apotheosized architect, or that of the Demiurge to whom he is assimilated, the pattern of Dürer's and Leonardo's knots is that indeed of a circumambient ornament, nimbus or investiture. It is in these senses that Hermes Trismegistus, describing the power of the solar Demiurge who draws (*elkōn*) all things to himself, says that “he is set up in the midst and wears the cosmos as a wreath about him,” and again, that the sensible Cosmos and all things therein “are woven like a garment” (*quasi vestimentum contexta*) by the Intelligible Cosmos.²¹

And now with reference to the minor knots or dependent loops which are formed in this endless cord, and are made apparent by the chiaroscuro as of a white warp on which a black woof is cross woven; these *nodi della vita* are the definitions of individual existences, determined by their names; and as such they are to be regarded favorably from the existential and unfavorably from the essential point of view. For, in the first place, “the cord (*tanti*, √ *tan*, extend) in his

¹⁹ *Brhadāranyaka Upaniṣad* III.7.1; cf. *Sarva Upaniṣad* 3 (19), where the thread on which the gems are strung is the Spirit (*ātman*, Self) as Inner Controller, just as for Plato the “golden cord” by which we are suspended from above is our Hegemon. The thread-spirit concept is not only widely diffused, but of great antiquity: for “the word *markasu*, ‘band,’ ‘rope,’ is employed in Babylonian mythology for the cosmic principle which unites all things, and is used also in the sense of ‘support,’ the divine power and law which holds the universe together” (S. Langdon, *Semitic Mythology*, 1931, p.109). Chuang Tzu (Ch. VI; in Hughes' version, *Everyman's Library* No. 973, p.193) speaks of the Tao as “the link of all creation”: the character rendered here by “link” is *hsi* (Giles 4062, synonymous with 4061 and 4104) with the meanings “dependence,” “fastening,” “tie,” “link,” “nexus,” “chain,” “lineage,” etc.; and as the phonetic determinant (=4061) in *hsi* is pictorially a strand of spun silk, it is clear that Chuang Tzu's is a “thread-spirit” doctrine. Again, bearing in mind that the “cord” can be equated with the “Word” of God, it is significant that a well-known Hadith describes the Qur'ān as “a rope to which every True Believer must cling for safety.”

²⁰ *Aitareya Āraṇyaka* I.4.3.

²¹ Hermes Trismegistus *Lib. XVI.5-7* and *Aesc. III.34 C*. In the first passage the verb (*hidriuo*) is one that is often used in connection with the “setting up” of statues, especially of heroes, and this reminds us of the medieval practise mentioned above. The comparison of the universe to a garment or tissue appears also in India, notably in the first words of the *Isāvāsya Upaniṣad*, “All this, whatever moveth in the moving-world, is the Lord's garment.”

(the Breath's, Life's) word (*vāc*, here = *logos*), and the knots (*dāma* = Gk. *desmós*) are names; and so with his word as the cord and names as knots all this universe is tied-up."²² "All transformation begins from the word, and is a matter of naming";²³ "everything here is held by name."²⁴ Writing quite independently on "Concatenation," Professor William Savery has remarked that "the chain of beings has strange loops!"²⁵

The giving of names by the Great Denominator is the primary act of creation.²⁶ Hence the importance of "christening," Skr. *nāmakarman*; for example, the new-born Agni complains that he is as yet nameless, and so "not freed from the evil," i.e., not really an existent; and hence "one should give a name," or more than one name, to a boy that is born, "for one thereby frees him from the evil," i.e., from mere non-entity.²⁷ Accordingly, one *ties* on an amulet or bracelet with the prayer: "May I abide firm as a rock. ... Man is the gem, Breath (or Life) the thread, Food the knot (*granthi*); that knot I knot, desiring food, the charm against death. May I attain the whole of my life, even old age,"²⁸ etc.

²² *Aitareya Āraṇyaka* II.1.6. *Déo, desmós* (Skr. *dā*, bind); *hélko; eíro, hérma, seirá* (Skr. *sṛ*, "glide," Lat. *series*); and *teino* (Skr. *tan, tanti, tantr, tantu, tanū*, etc.) are the key words in Greek and Indian contexts for the present cycle of ideas. The equation of knots with names may be connected with what was once an almost worldwide (old Chinese, Sumerian, Hebrew, Mexican) method of keeping records by means of knotted string. Thus Jeremias observes that Gudea seems to speak of "knots of words," and that in Sumeria knots may have preceded writing (*Altorientalische Geistesgeschichte*, p.19); and Gaster that in OT. *sis* = ball or knop and that in Numbers 15:38, 39, etc. the reference is not to "fringes" but to "elaborate mnemonic knots," while the beads of rosaries have taken the place of what were originally knots (*Folklore*, XXV (1914), pp.254-258). St. Augustine refers to "knots, which they call characters," and which have either a hidden or an evident meaning (*De doctr. christ.*, II, 20). In the *Kathā Sarit Sāgara* 25.14 (Bombay ed. 1889, p.116) the beads of an aged Brahman ascetic's rosary are compared in number to knots (*granthi*) marking the centuries of his life (cf. Penzer II.189). The trace of the use of mnemonic knots seems to survive in Skr. *grantha, granthana* = literary composition and *granthin*, one who knows the letter of a text (Manu XII.103). We can still speak of the "thread of a discourse" or of that of an argument; and tie mnemonic knots in handkerchiefs or round a finger. Our problems, too, are often "knotty"; and we call the outcome of a drama the *dénouement*.

²³ Chāndogya Upaniṣad VI.1.4.

²⁴ Śatapatha Brāhmaṇa IV.6.5.3.

²⁵ *Journal of Philosophy*, XXXIV (1937), p.351.

²⁶ *Rgveda* III.38.7, X.82.3 and passim.

²⁷ Śatapatha Brāhmaṇa VI.1.3.9, cf. Kauṣītaki Brāhmaṇa VI.2.

²⁸ Sāṅkhāyana Āraṇyaka XI.8.

On the other hand all determinations or knots are bonds from which one could wish to be freed rather than remain forever “all tied up in knots.” One would be released from all those “knots (*granthi*) of the heart,” which we should now call “complexes” and of which the ego-complex (*ahamkāra*, *abhimāna*, Philo’s *oīēsis*) is the tightest and the hardest to be undone.²⁹ The concept of liberty, in Vedic contexts, is repeatedly stated positively in terms of “motion at will” and negatively in those of release from bonds, knots, or nooses (*bandha*, *granthi*, *pāśa*, etc.). In Skr. also, to be independent (“on one’s own hook”) is expressed by the significant term *sva-tantra* ($\sqrt{\text{tan}}$), “being one’s own thread, string or wire”; we are not, then, if we “know our Self,” the knot, but the thread in which the knot is tied or on which beads are strung, the meaning of which will be clear from the often repeated simile of the threaded beads, cited above. The knots are many, but the thread is one. Indra, the Great Hero (*mahāvīra*) is said to have “found out the secret knot of *Śuṣṇa*,”³⁰ and it is significant that the followers of the later *Mahāvīra* are known as Nirgrantha, “whose knot is undone.” There is a prayer addressed to Soma to “untie as it were a knot, the entangled (*grathitam*, knotted) straight and tortuous paths,”³¹ that is, almost literally, to guide us through the labyrinth in which these ways are indeed confused. The Spirit is in bonds only where and when the knots of individuality are tied; its and our true Self is the continuity of the thread on which the individualized entities are strung.³²

“Continuity of the thread”: in these words lies the clew to the doctrine *que s’asconde nel velame degli nodi strani*—to adapt the words of Dante that must have been familiar to Leonardo. For what our “complex” states—and solves—is the relationship of one to many: “one as he is there in himself, many as he is here in his children”;³³ one as thread and many in the knots, for as the *Brahma Upaniṣad* expresses it,

²⁹ For the “knots of the heart” see *Chāndogya Upaniṣad* VII.26.2 and *Kaṭha Up.* VI.15, etc. The references to bonds and knots collected in J. Heckenbach, *De nuditate sacra sacrisque vinculis*, Giessen, 1911, have mostly to do with the ritual untyings that symbolize a spiritual liberation (*lūsis*, *mokṣa*).

³⁰ *Rgveda* X.61.13.

³¹ *Rgveda* IX.97.18.

³² Cf. *Sarva Upaniṣad* 1-3 and 19.

³³ *Śatapatha Brāhmaṇa* X.5.2.16, in answer to the question, “Is he one or many?”

the solar Spider spins his web of a single thread;³⁴ an omnipresent thread, immanent and transcendent, “undivided in things divided,” “measureless in measured things,” “bodiless in bodies,” “imperishable in the perishable,”³⁵ “th’ unstable, Thou, the stable, rangest.”³⁶

To have realized that the thread is one, however many the knots, is to be assured that by holding on to this one thread or golden chain by which, as Plato says, we are suspended from above, we cannot go astray; it is only for so long as we think of the knots as independent substances that we cannot “thread the maze” or escape from the toil.³⁷ The device is really a labyrinth, and whoever keeps on going without ever turning back, however much the way winds, will inevitably reach “the end of the road”; and just as in the medieval labyrinths he will see there the image of the architect, or at the center of the knots their author’s name, so there at world’s end will be found the cosmic Architect, who is himself the Way and the Door.³⁸

The unity of the thread is reflected in what has been called the “one-line technique,” of which our knots are an example, and that is equally of our knots and of the spiral forms to which the labyrinths approximate. In this technique, one line is used to form the whole design. The line is often white on a black ground, and as E. L. Watson says, “the use of white lines, known as ‘negatives,’ to carry the continuity is a prehistoric characteristic”;³⁹ and while the line is by no means always thus a “negative,” its whiteness is still conspicuous in the case of our knots and in the representations of labyrinths. Good examples of the continuous white line, combined with spirals, are represented in the two designs (Figs. 7, 8) from American Indian

³⁴ Thus “putting on appearances about his own thread (*tanū*)” (*R̥gveda* III.53.8, cf. VI.49.18), “winding through” them all (*ibid.* I.69.2).

³⁵ *Atharva Veda* X.7.39, XI.4.15; *Kāṭha Upaniṣad* II.22; *Bhagavad Gītā* XIII.7.16, XVIII.20, etc. Cf. *Hermes Trismegistus Lib.* V.10 a.

³⁶ Joshua Sylvester.

³⁷ Lat. *tela* (*texla*), “web,” and metaphorically “pattern” or “design.”

³⁸ The analogy of the human and divine architects is drawn repeatedly throughout the Middle Ages. Leonardo says himself that “that divine power, which lies in the knowledge of the painter, transforms the mind of the painter into the likeness of the divine mind” (H. Ludwig in Eitelberger’s *Quellenschriften für Kunstgeschichte*, 68).

³⁹ Edith L. Watson, “The One-Line Technique,” *Art and Archaeology*, XXXIV, Sept.-Oct. 1933, pp.227-234, 247.

(Mimbres) bowls, both of which are unquestionably cosmic diagrams.⁴⁰ On the other hand, the one-line technique in black has quite an extraordinary development in European calligraphy. Here, quite likely, it is at last employed solely for decorative purposes and without awareness of an implicit significance, although in the hands of the Spaniard Pedro Diaz Morante, perhaps its most brilliant exponent, it is repeatedly employed to form traditional motives that are far from meaningless to anyone who is acquainted with their history. One of these (Fig. 9), in which the ancient motive of the Hare and Hounds⁴¹ is treated, is reproduced here from Morante's little book of calligraphic models, entitled *Nueva Arte de Escribir*,⁴² in which, however, far more complicated examples are to be found. We find the "one-line," too, employed in parts of his wood engraving of the Phoenix (Fig. 10), protecting a trinity of rabbits (who are guarded also by a one-line "fence") from the poison of the snake, in what Strzygowski would have called a "Hvarena landscape" and is undoubtedly a Paradise; the inscription, "My piety makes light of poison," in connection with the ancient motive of the Sunbird killing a snake, makes it almost certain that Morante meant his Phoenix for a type of Christ; while the form of the "fence" reminds us that the Greek key-pattern or meander had once a metaphysical significance.⁴³ But it is, perhaps, in the New Hebrides that the one-line technique attains its fullest development.⁴⁴ Here

⁴⁰ After E. L. Watson, *loc. cit.* The types illustrated have many close parallels in old world art, see, for example, Anna Roes, "Tierwirbel," in *IPEK*, II (1936-37), Abb. 12, 21, 31.

⁴¹ For this motive, which is closely connected with that of the Symplegades, see E. Pottier, "L'histoire d'une bête," *Revue de l'Art Ancien et Moderne*, t. XXVII (1910), pp.419-436, and Karl von Spiess, "Die Hasenjagd," *Jahrb. f. Historische Volkskunde*, V, V1 (1897), pp.243-267.

⁴² Parts I-IV, Madrid, 1616-31.

⁴³ "From the fact that it was used to surround the figures of divine and royal persons and was associated with cult objects, the pattern seems to have possessed a protective value" (C. N. Deedes, *op. cit.*, p. 11). It can hardly be doubted, indeed, that this was the original intention of all kinds of borders, frets and frames enclosing a field. Cf. E. Küster, *Der Schlange in der griechischen Kunst und Religion*, Giessen, 1913, pp.10, 18, 21, 25, 95 (the formal development of the neolithic snake-motive is from the single to the double spiral, then to the continuous spiral ("running dog") and finally to the spiral meander; the significance of the snake is not only vegetative, but also apotropaic).

⁴⁴ A. B. Deacon, "Geometrical Drawings from Malekula and other Islands of the New Hebrides," *J. Roy. Anthropol. Inst.*, LXIV (1934), p.129 f; and T. Harrison, *Savage Civilisation*, 1937. See also John Layard, *Stone Men of Malekula: Vao*, London, 1942,

drawings representing a great variety of animals and other forms, and in some cases at least having a religious significance and delineating the Way, are made with a pointed stick on a surface of smooth sand and are not permanent; the one-line tortoise (Fig. 17) is curiously like a tortoise that occurs in Morante's book. There can be no doubt but that the well-known "string-figures" which represent all kinds of subjects and are met with in such variety all over the world, are also delineations in a similar sense. What, indeed, is Leonardo's "fantasy" but the representation of a "string-figure" of the universe?

We have already remarked that our knots and labyrinths approximate to spiral forms. In the case of the single spiral, which resembles a coiled rope or snake⁴⁵ it is evident that if we follow round the line from the outside we reach a center, just as in following round the thread of a spider's web we should reach the spider's "parlor." Of such a spiral we reproduce a remarkable example from the Berthold Missal (Fig. 11);⁴⁶ and it will be noticed that the spiral, formed of the main stem of the Vine (of which "ye are the branches," John 15:1), when we come to the navel of the design, turns inwards, out of the plane of the design, and can only be thought of as connected with the figure of the Pantokrator seen above the cross-bar of the Tau; it is, in fact a tree whose "roots are above."⁴⁷ If we turn from such a spiral as

reviewed by M. F. Ashley Montagu in *Isis* XXXV, (1944), pp.43, 44 ("Mr. Layard's valuable analysis of the relationship between the ingenious labyrinthine sand tracings of Vao and Atchin and mythology. Here we see clearly how illuminating the carefully recorded facts of a primitive culture can be for our understanding of puzzling problems presented by later cultures"); cf. notes 5-7, above.

⁴⁵ We cannot enter here into the intimate connection of "ropes" with "snakes," and can only remark in passing that from certain points the convolutions of our "cord" are to be regarded as the coils of a cosmic serpent, in which we are entangled. Designs of interlacing serpents are met with all over the world and are very abundant. Cf. H. H. van der Osten, "The Snake Symbol and Hittite Twist," *AJA.*, Series II, XXX (1926), 405-417. For the elaborate technique by which the spiral designs of primitive art appear to have been actually traced and some discussion of the meaning of spirals, see Lars-Ivar Ringbom, "Entstehung und Entwicklung der Spiralornamentik," *Acta Archaeologica*, IV, Kobenhavn, 1933.

⁴⁶ Hanns Swarzenski, *The Berthold Missal* (Pierpont Morgan Library MS 710), New York, 1943 (folio ii v., full page initial T).

⁴⁷ For this motif see my "Inverted Tree," *Q. J. Mythic Soc.*, XXIX, 1938. Also Richard Rolle de Hampolle, *Pricke of Conscience*, 11.662-685, quoting and based upon Pope Innocent III, *De contemptu mundi*, lib. I, cap. 9.

this to Claude Mellan's extraordinary engraving (Fig. 12),⁴⁸ a representation of the Sudarium by means of an unbroken spiral line which, after countless revolutions, ends on the tip of the nose, the center of the Christ face, we do not need the assurance of the subscription *Formatur unicus una* (By one the One is formed), to convince us that this is no *mere* tour de force. The spiral line is inevitably lost in the reproduction.

From the single we are naturally led to a consideration also of the double spiral.⁴⁹ Here too we shall meet with striking illustrations of the one-line technique. The spiral itself is a growth form;⁵⁰ and it will depend upon our own orientation with reference to movement along it, whether we think of it as a centrifugal or as a centripetal form. This ambiguity is made more explicit where we have before us a pair of connected spirals of which the convolutions are either in opposite directions or which are placed on opposite sides of a common axis. These oppositions are essentially those of the paired motions of evolution and involution, birth and death, positive and negative values, etc., that inhere in the totality of the world extended in space and time.⁵¹ On opposite sides of a common axis (where they are sometimes replaced by two separate forms each of concentric circles) they correspond to the right and left hand branches of the Sephirothic Tree and more generally to the "things of the right hand and those of the left." This is sufficiently clear in the Boston Museum earring (Fig. 13), of the type of which the history has been discussed by Miss Berta Segall.⁵² The motive survives in the folk art of Sumatra (Fig. 14).⁵³

⁴⁸ Cf. Ch. le Blanc, *Manuel de l'Amateur d'Estampes*, III, 3, No. 33. Mellan's dates are 1598-1668.

⁴⁹ Cf. René Guénon, "La Double Spirale," *Etudes Traditionnelles*, 41, 1936. See also René Dussaud, *Les civilisations préhelléniques*, 1910, p.218 f; the motive had a religious significance and played a part in ritual.

⁵⁰ T. A. Cook, *The Curves of Life*, London, 1914; D'Arcy Wentworth Thompson, *Growth and Form*, Cambridge (Eng.), 1943.

⁵¹ Compare the winding and unwinding of the ribbons by which the dancers are connected to the Maypole. The history of the labyrinth is intimately connected with that of dancing and we still speak of "treading a maze."

⁵² MFA. *Bulletin*, No. 245, 1943.

⁵³ "Wer sich darüber wundert, dass ein Symbol als Form nicht nur jahrtausendlang am Leben bleibt, sondern auch ... nach tausendjähriger Unterbrechung wieder zum Leben entsteht, der möge sich sagen, dass die Kraft der geistigen Welt, welcher der einen Teil

Even more interesting is the double spiral form of many early fibulae, of which there is a magnificent example in the Metropolitan Museum of Art, New York (Fig. 16).⁵⁴ The outstanding constructional feature in these brooches is the fact that the whole is made of a single wire, of which one end (which may be called the beginning) forms the “eye” and the other the “hook”⁵⁵ (which may be called its termination); it is, in other words, a metal pin or needle, bent upon itself, so that when it fastens anything the point rejoins the head or re-enters the eye; a wiry “thread” that ends where it began; and a snake with its tail in its mouth; and what it holds together is the two opposite edges of a “material” that is itself an imitation of the cosmic veil in which the spirit of life at once conceals and reveals itself. The whole is, so to speak, a puzzle: for what one sees when the device is in act, is only the two spirals, and it is not apparent that the whole is really an endless circle in which the visible spirals are the knots; we do not “see the point.”⁵⁶ The last end and the first beginning coincide.

des Symbols bildet, ewig ist” (W. Andrae, *Die ionische Säule, Bauform oder Symbol*, 1933, p.66).

⁵⁴ Many others are illustrated in Chr. Blinkenberg’s fascinating book *Fibules grecques et orientales*, Kobenhavn, 1926, pp.253-261. There are also examples of a type with four spirals (Fig. 15), forming a swastika, and a few with six spirals and a central disk. The spiral fibulae are actually “Geometric” (9th century B.C. and later), but so far as their form is concerned they represent a survival of Mycenaean style. The form in which the spirals are replaced by independent circular disks, although contemporary, is typologically a derivative of the double spiral type. It may be observed here that the modern “hook and eye” is nothing but a divided fibula. It may be noted that “frogs” have nothing to do with the *Batrachia* but with Lat. *floccus*, a “flock” of wool, cf. “frock.”

⁵⁵ The notion of the “hook” which corresponds to the point of the pin by which the material is really “caught” up, appears also in the symbolism of fishing with a line. For example to the *logos*, “I will make you fishers of men” (Mark 1:17) corresponds Hafiz’ couplet, “Fish-like in the sea behold me swimming, Till he with his hook my rescue maketh.” This means of rescue has, indeed, actually been provided for the saving of shipwrecked men and one can easily see how well a naval chaplain could preach on such a text. In fishing with a net the whole body of the net, and in hunting with a lasso the slip-knot, corresponds to the “hook.”

⁵⁶ We have previously discussed the symbolism of safety-pins in an article on the “Primitive Mentality” (*Q. J. Mythic Soc.*, XXXI, 1940) and remarked there that “the significance of the metal pin, and that of the thread that is left behind by the needle are the same: it is that of the ‘thread-spirit’ (*sūtrātman*) by which the Sun connects all things to himself and fastens them; he is the primordial embroiderer and tailor, by whom the tissue of the universe, of which our garments are an analogy, is woven on a living thread.” In the same connection it may be noted that the gold threads with which

The primary sense of “broach” (= brooch) is that of anything acute, such as a pin, awl or spear, that penetrates a material; the same implement, bent upon itself, fastens or sews things together, as if it were in fact a thread. French *fibule*, as a surgical term, is in fact *suture*. It is only when we substitute a soft thread for the stiff wire that a way must be made for it by a needle; and then the thread remaining in the material is the trace, evidence and “clew” to the passage of the needle; just as our own short life is the trace of the unbroken Life whence it originates. We cannot here pursue the symbolism of embroidery, i.e., of the technique itself, except to call attention (1) to the correspondence of the needle to the arrow and (2) to the well-known symbolism of the “needle’s eye” as a strait gate. How the quarters are attached to the Sun by a pneumatic thread, as stated, in *Śatapatha Brāhmaṇa* VI.7.1.17, is very clearly demonstrated in the *Sarabhangā Jātaka*, where the Bodhisatta Jotipāla (the “Keeper of the Light”) standing at the center of a field, at the four corners of which there have been set up posts, attaches a thread to the nock of his arrow and with one shot penetrates all four posts, the arrow passing a second time through the first post and then returning to his hand; thus, indeed, he “sews” all things to himself by means of a single thread. We meet with the needle’s eye not only in the familiar context of Luke 18:25, but again in Rūmī’s *Mathnawī* I.3065, “’Tis the thread that is connected with the needle; the eye of the needle is not suitable for the camel.”

We have said enough, perhaps, to remind the reader that in primitive art the needs of the soul and body are provided for at one and the same time, thus fulfilling the condition on which Plato admitted the artist to his ideal city. Here there is no divorce of meaning from use; much rather, the aptitude and beauty of the artefact (*et aptus et pulcher*, like St. Augustine’s stylus and Xenophon’s house) at the same time express and depend upon the form (idea) that underlies it; content and shape are indivisible. As Edmund Pottier says: “à l’origine toute représentation graphique répond à une pensée concrète et précise: c’est véritablement une écriture.”⁵⁷ In the same way the art of the Middle

a material is often shot through are explicitly in order to enliven it (*Śatapatha Brāhmaṇa* V.3.5.15) in accordance with the recognized equation of “gold” with “life, light and immortality.”

⁵⁷ *Céramique peinte de Suse*, Délégation en Perse, XIII (1912), 52.

Ages “was at once a script, a calculus and a symbolic code” and by the same token still “retained the hieratic grandeur of primitive art.”⁵⁸ The Middle Ages, for which art had been not a merely “aesthetic” experience but an “intellectual virtue,” lived on into the Renaissance; the modern divorce of “science” from “art” had not yet taken place; a Guido d’Arezzo could still maintain that it was not his art but his *documentum*, i.e., doctrine, that made the singer; philosopher and artist could still be combined without conflict in one and the same individual. M. Vulliaud remarks that some of Leonardo’s works are “enigmatic,” and can only be understood in the light of the “intellectualism of the Renaissance.” He is speaking, indeed, of the paintings, but what he says will apply as well to the geometrical “fantasies.” He points out that the Renaissance, too, “expressed itself through the *lingua franca* of symbolism” and that Leonardo was by no means the least of those artists in whose works it is the voice of the spirit rather than that of fancy that can be heard. “To pretend,” he says, “that Leonardo painted traditional subjects in which he did not believe, I dare not.”⁵⁹ Belief is defined theologically as “assent to a credible proposition” and we are asked to “believe in order to understand.” For the modern decorator, indeed, ornament is nothing but an “ornament,” devoid of any “meaning”; but I cannot admit that Leonardo was already one of those who do not “understand their material.” And even if it could be proved that in his concatenations he was only amusing himself, it would still remain that these unilinear devices retain a meaning in the same way that a word retains its meaning even when spoken by one who no longer knows what it means, and that its history can only be understood when we take account of this meaning.

I am sure that nearly every reader of the present article will spring to Leonardo’s defence, claiming that he was nothing but an artist and interested only in beauty. Many of our art historians and most of our estheticians claim that whereas art began with utility, the artist gradually frees himself from all mundane ties and spiritual theses, the idea of beauty then separating itself from life to stand alone in its own right. Thus Jerphanion distinguishes the interest of the archaeologist who seeks in the monument for *l’expression d’une pensée* from the critic

⁵⁸ Emil Mâle, *Religious Art of the Thirteenth Century in France*, 1913, Introduction.

⁵⁹ Vulliaud, *op. cit.*, pp.102-103.

and historian of art whose only concern is to discover *un rayon de beauté*.⁶⁰ It is in the same sense that Deonna hails the “progress” of art from a primitive *formality* to a classical *figuration* in which all significance is lost and there remains nothing but an esthetic surface to which we are expected to react only emotionally; what had been an imitation of nature in her manner of operation becomes an imitation of *la nature morte*. But at what a price has this “emancipation,” H. M. Kallen’s “conquest of fate and defeat of God,” been bought! As Deonna himself admits, “les belles apparences,” to which the art is now directed are:

de beaux corps trop souvent dépourvus de vie intérieure.
L’imitation de la réalité, entraîne le classicisme sur cette pente que
devait lui être funeste ... le primitivisme demeure vivace ... le
classicisme, après avoir parcouru en quelques siècles ses possibilités,
est épulsé, et ne peut se renover par lui-même.⁶¹

Ours is, indeed, a world of *impoverished* reality.⁶²

We have no intention to deny that Leonardo cared, perhaps as much as Plato himself, for “beauty”; our argument is that “the beauty of the material world” was still for him, as for Marsilio Ficino, “a kind of shadow or symbol of that of the immaterial world”; and that this applies as much to his abstract “fantasies” as to his more realistic drawings. Leonardo was still a whole man. Our distinction of a fine from an applied art, of the artist from the workman and of the archaeologist from the critic, are all the evidence of the contemporary schizophrenia; for none of these, by himself, is a whole man. Is it not absurd to pretend that man *cannot* be at the same time an archaeologist and a philosopher or theologian whose interest is in ideas, *and* an artist whose interest is in “beauty” or in “feeling,” or to pretend that the artist was less a man when he designed ornaments for the use of goldsmiths or embroiderers

⁶⁰ G. de Jerphanion, *La Voix des monuments*, Paris, 1930.

⁶¹ W. Deonna, “Primitivisme et classicisme, les deux faces de l’histoire de l’art,” *Bull. De l’Office Internat. d. Inst. d’Archéologie et d’Histoire d’Art*, X, 1937. That the so-called progress from formality to figuration is in reality a decadence is the thesis of A. Gleizes’ *Vers une conscience Plastique, La forme et l’histoire*, Paris, 1932.

⁶² Cf. Iredell Jenkins, “The Postulate of an Impoverished Reality,” *Journal of Philosophy*, New York, XXXIX, 20, 24 September 1942, pp.533-546.

than when he painted the Gioconda? Let us at least desist from the persuasion that the primitives cared only for ideas on the one hand and the Renaissance only for beauty on the other. We assert that Leonardo's concatenation is *et aptus et pulcher* and that these are qualities inseparable in the thing itself; the knots are food for the mind as well as for the eye.

One further word: our customary horror of all "symbolic" explanations of works of art, apart from the fact that we are no longer interested in the intangibles to which the symbols refer, arises from the fact that symbolic analysis has so often been undertaken by amateurs and "interpreted" rather fancifully than knowingly. Then, again, we have in mind the romantic vagaries of the modern symbolists, with whose *symbolisme qui cherche* our traditional *lingua franca*, that of *le symbolisme qui sait*, has very little in common. A language that can be described as a "calculus" and as "precise," demands to be studied by methods no less disciplined than those of the philologist. We have tried to show in the present article how such investigations should be conducted.

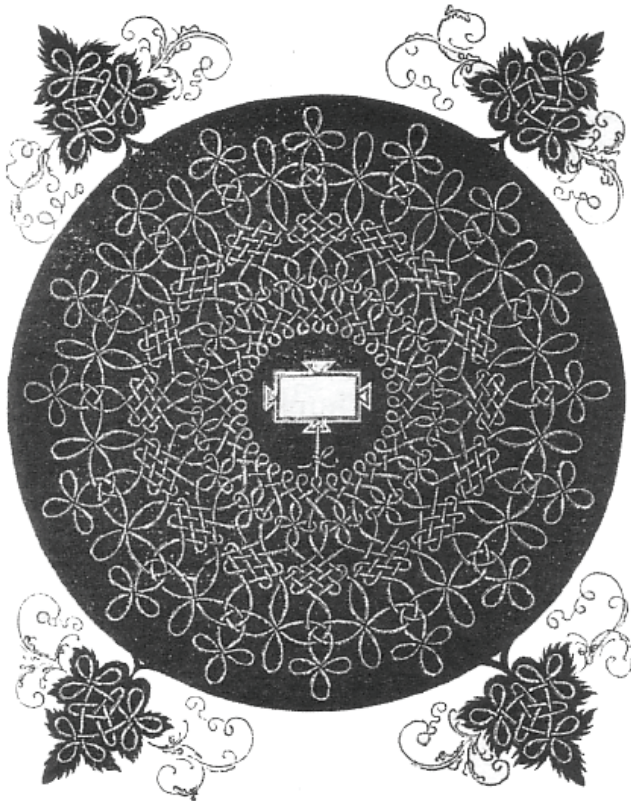


Fig. 1.
One of Dürer's
"Sechs Knoten"

Fig. 2.
Leonardo da Vinci
"Concatenation"

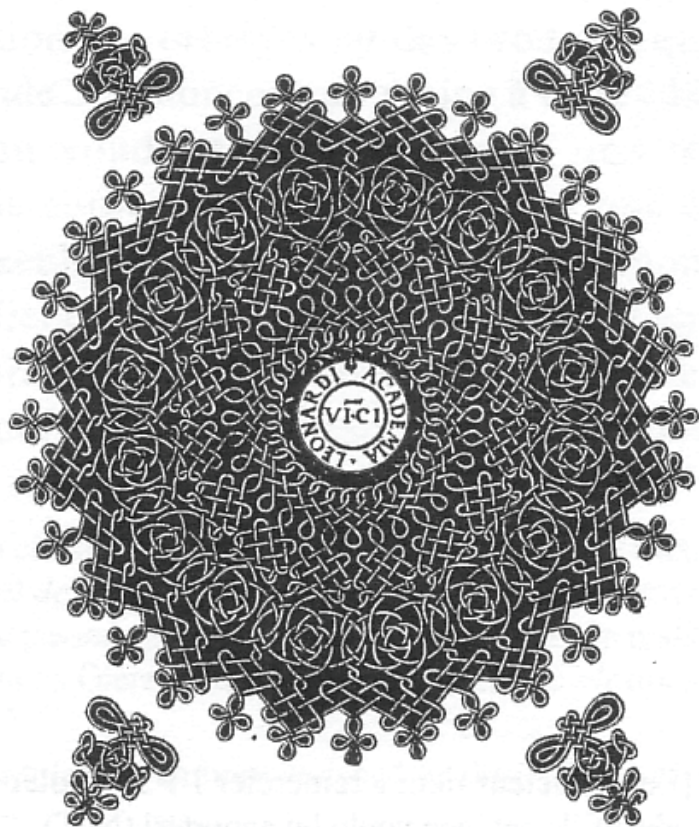




Fig. 3.
Labyrinth, Chartres
After Hahnloser, Abb.40

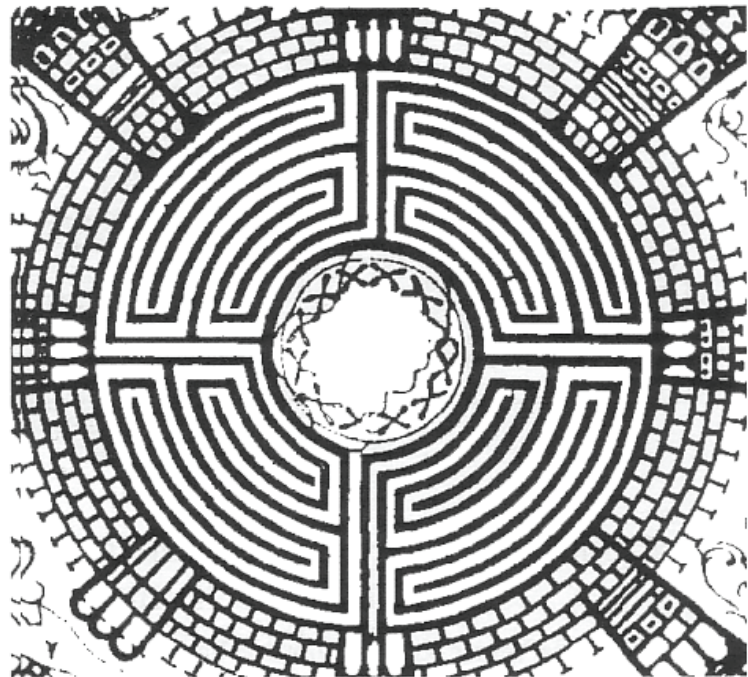


Fig. 4.
Labyrinth,
Roman Pavement, Verdes
After Hahnloser, Abb.39

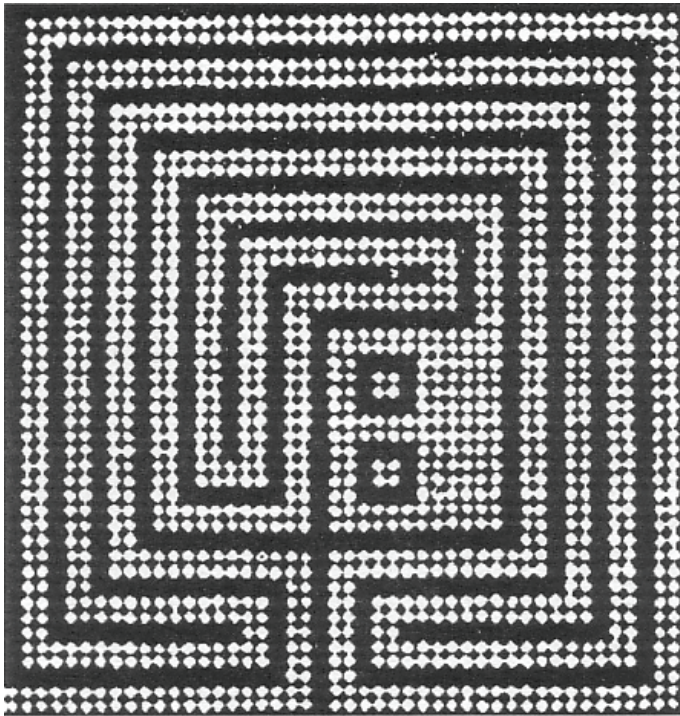


Fig. 5.
Labyrinth, Basket-work, Ceylon,
Coomaraswamy,
Mediaeval Sinhalese Art, 1908
Fig.143

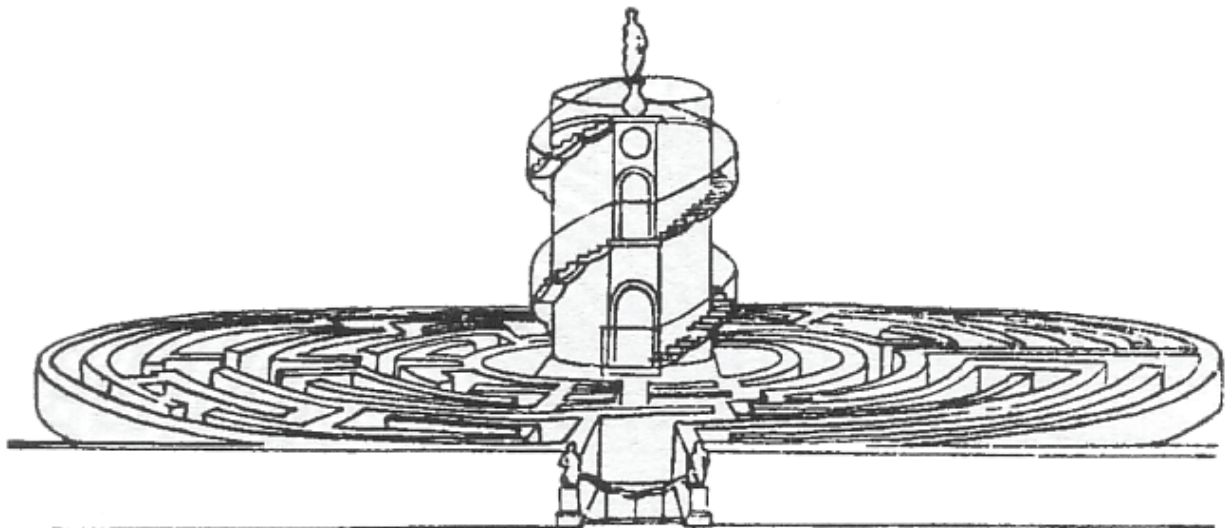


Fig. 6.
Labyrinth and spiral tower,
Villa Pisani, Strà
After W. Born, *Gazette des Beaux-Arts*, 1943, p.248



Fig. 7 & 8.
Designs from Mimbres Bowl
After E. L. Watson, *Art and Archaeology*

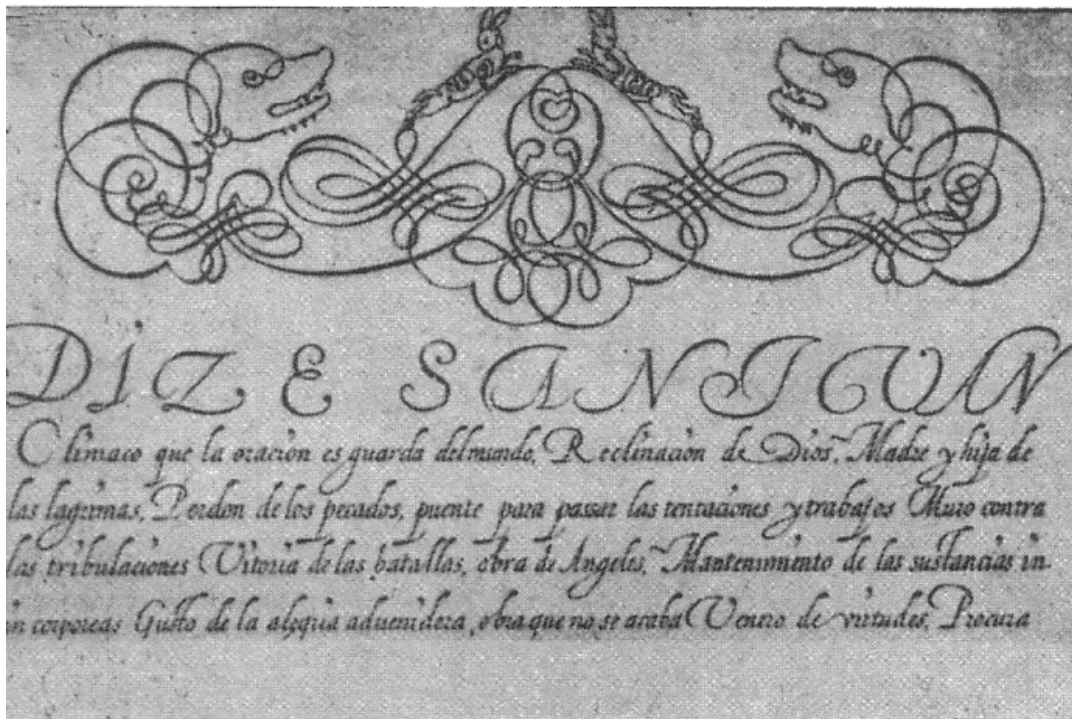


Fig. 9.
Hare and Hounds
Designed by Morante, 'Nueva Arte de Escribir'



Fig. 10.
Phoenix
Engraving by Morante



Fig. 11.
Initial Tau, Missel de Berthold,
New York, Pierpont Morgan Library



Fig. 12.
Claude Mellan, 'One-line Sudarium,' 1649

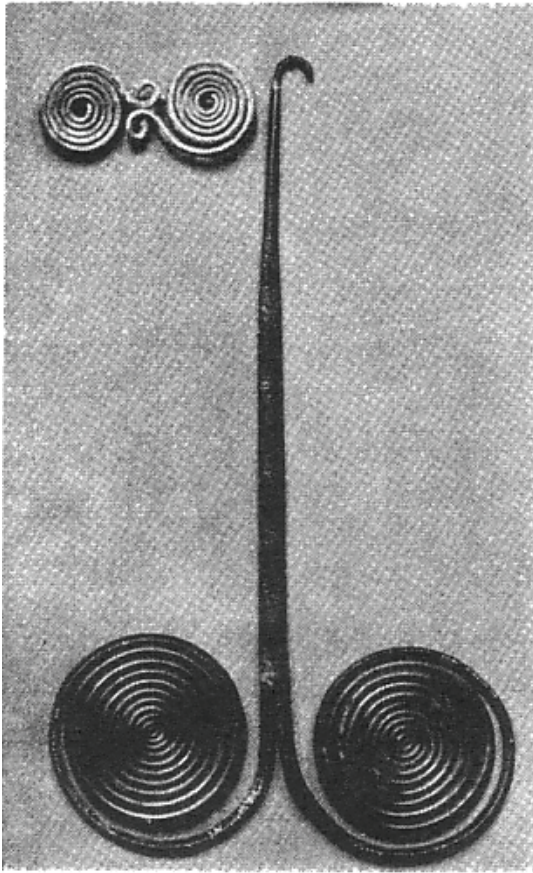


Fig. 13.
Greek Archaic,
Fibula and Earring
Boston, Museum of Fine Arts

Fig. 14.
G. Kinzer
Batak Woman
(drawing)



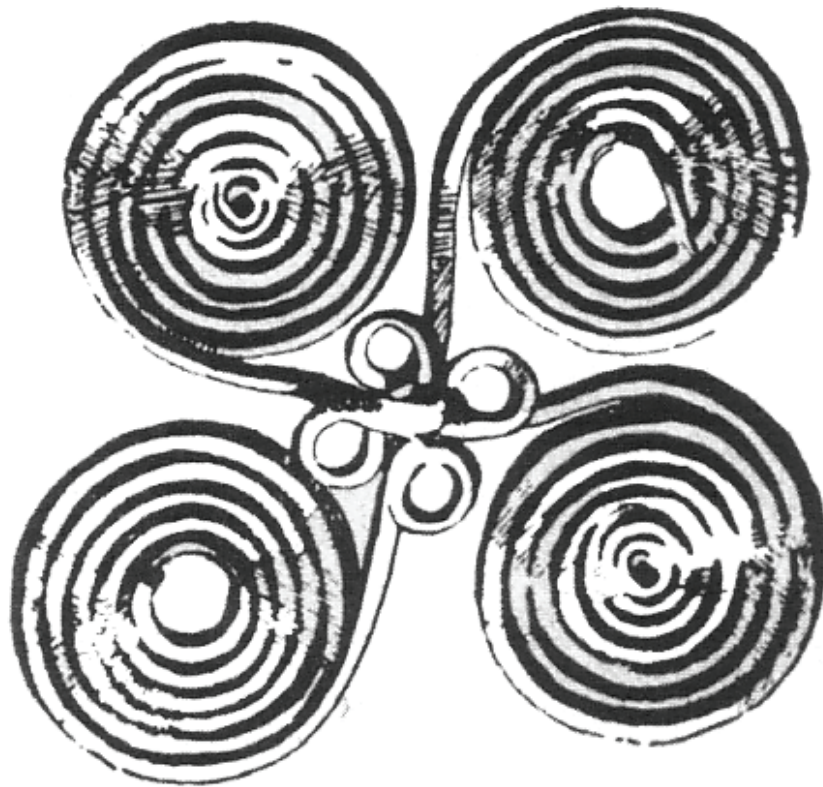


Fig. 15.
Boeotian 9th-7th C. century B.C., Four-spiral (swastika) Fibula
After Blinkenberg, Fig.388

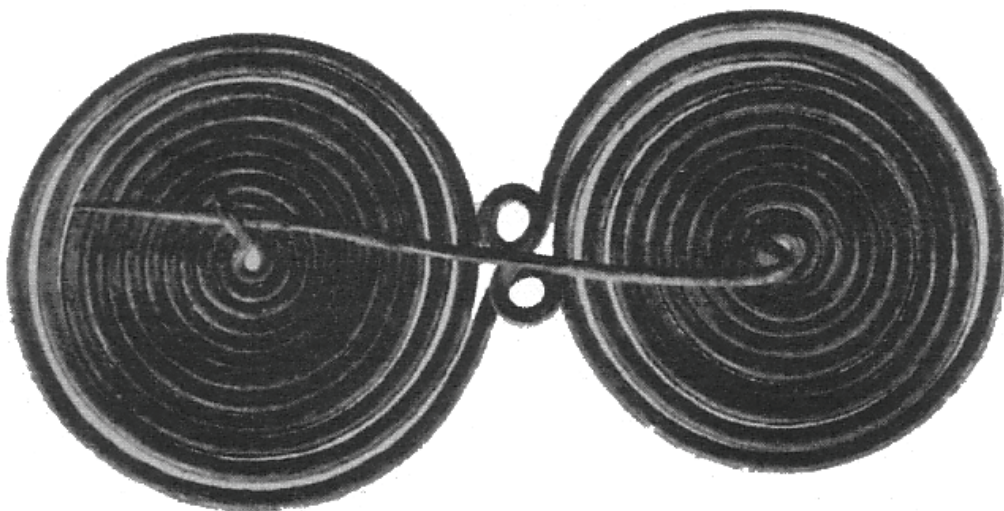


Fig. 16.
Greek Geometric, Double Spiral Fibula
New York, Metropolitan Museum of
Art

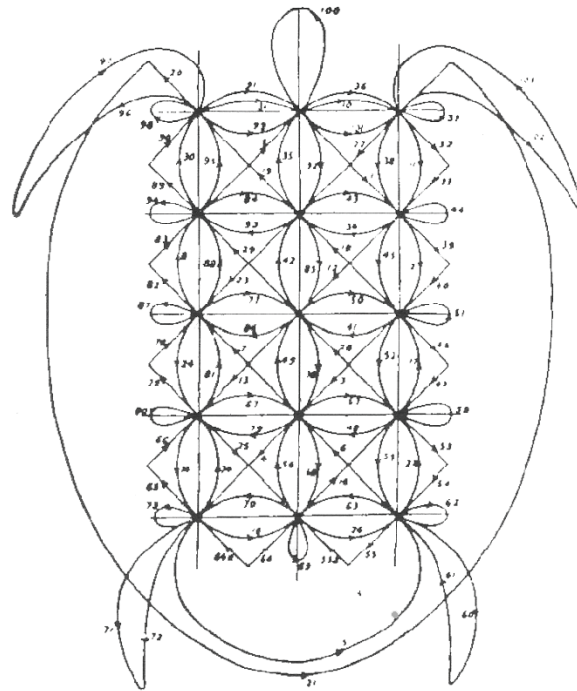


Fig. 17.
New Hebrides, One-line Tortoise
After Deacon and Harrison

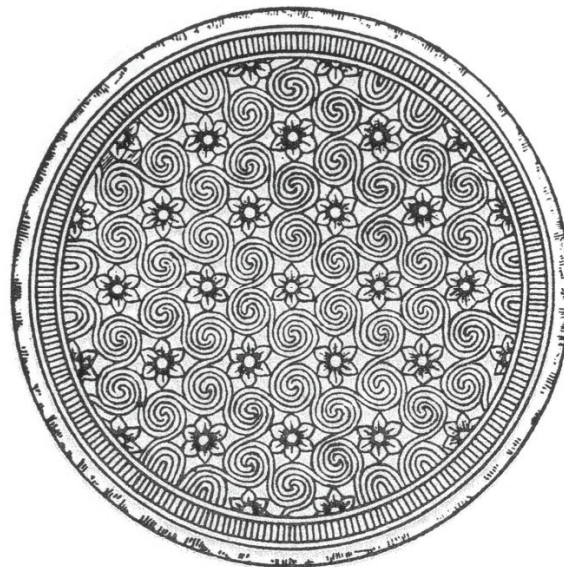


Fig. 18.
Basarh, India before 4th A.D.
Stone Tablet
ASI.AR., 1930-4,p.99