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ARISTOTLE'S CHIROMANTIC PRINCIPLE AND ITS INFLUENCE

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Surveying the anatomy of the human body, Aristotle writes in his *Historia animalium:* "The inner surface of the hand is the palm (*θέναρ*), which is fleshy and divided by lines (*διῃρημένον ἄρθροις*); in long-lived persons by one or two lines, which go right across, in short-lived by two which do not go right across (*τοῖς μὲν μακροβίοις ἑνὶ ἢ δυσὶ δι' ὅλου, τοῖς δὲ βραχυβίοις δυσὶ καὶ οὐ δι' ὅλου*)."[1] This dictum had an extraordinary influence, which its author could hardly have foreseen: the correlation between length of lines and length of life became an axiom of the pseudo-science of chiromancy or palmistry.[2] Similarly, some statements made in earlier chapters of the *HA* contributed to the growth of another false science, that of physiognomy,[3] and in the course of time an even stranger form of character-analysis or divination was elaborated, probably encouraged if not inspired by Aristotle's remark that a sneeze is a "divinatory, supernatural sign" (*HA* 1.11.492B6).

The number of lines supposedly present in the palms of long-lived and short-lived persons is enigmatic, as there is no clear-cut antithesis between "one or two" and "two." We shall find that most of Aristotle's translators and commentators avoided this crux by ignoring or even altering the figures.

The unknown author of the Pseudo-Aristotelian *Problemata* twice raises the question "Why is it that all those who have a cut (*tomê*) right across the hand are long-lived?" (*Pr.* 10.49.896A37, 34.10.964A33), and he suggests as an answer that ill-articulated (*anarthra*) animals, for example, those that live in the water,[4] are short-lived, consequently well-articulated

[1] *HA* 1.15.493B33–494A1, in the translation of A. L. Peck (Loeb 1965).

[2] See R. A. Pack, "On the Greek Chiromantic Fragment," *TAPA* 103 (1972) 367–80.

[3] Note the significance of certain variations in foreheads and eyebrows (*HA* 1.8.491B12–17), the corners of the eyes (1.9.491B22–26), and the ears (1.11.492B2). These rules were appropriated by Pompeius Trogus, *De animalibus,* quoted by Pliny, *HN* 11.275–76. See R. Foerster, *Scriptores Physiognomonici Graeci et Latini* (Lipsiae 1893) 2.258–63.

[4] Aristotle, *HA* 5.18.550B14, says that the squid and the cuttle-fish are short-lived.

creatures must be long-lived and a well-articulated hand must be a sign of long life. The number of articulations is not specified, and so an embarrassing phase of the problem has been tacitly suppressed. The writer's analogy suggests that he is thinking of real articulations in the hand's osseous structure instead of mere creases in its surface. If so, he stands in virtual isolation, because nearly all subsequent interpreters, from Pliny to A. L. Peck, have taken the other view. Aristotle's phrasing implies that, while the short-lived have the usual two *arthra,* the long-lived may have just one, but this, if applied to articulations, would have been an error of observation more radical than most of those which biologists have charged to his account.[5] Though it is doubted that he ever saw a human skeleton[6] or ever dissected a human body,[7] such experience would scarcely have been necessary in investigating manual mechanics. His mistake about the number of sutures in the cranium[8] is of a different order. We wish that he had clarified this point in his encomium of the hand (*PA* 4.10.687A8-B22), where he observes that man's endowment with hands is related to his superior intelligence; of special interest is his keen appreciation of our opposable thumb.

The elder Pliny, for the moment in a critical mood, professes astonishment that Aristotle could not only have believed but even have promulgated such notions. For his part, he regards them as idle fancies which he hesitates to publicize for fear that some of his readers might anxiously search in themselves for such ominous symptoms, but he has decided to record them in deference to the great philosopher's authority. Signs of a short life, then, are a paucity of teeth (cf. *HA* 2.3.501B22), excessively long fingers, a leaden complexion, and quite a number (*plures,* cf. note 30, below) of short "incisions" (*incisurae*) in the palm; of long life, rounded shoulders, one or two long incisions in the palm, more than thirty-two teeth, and big ears.[9] Actual articulations can hardly be in question.

The earliest complete Latin translation of the *HA* was produced at Toledo in the early years of the thirteenth century. It was the work of Michael Scot, who later became the court astrologer of the emperor Federico II, and it was not based on the Greek original but on an Arabic version which itself depended upon a Syriac rendering of the Greek. The

[5]Evidently they have not catalogued this among his errors. See G. H. Lewes, *Aristotle: A Chapter from the History of Science* (London 1864) 164–70; G. Sarton, *Introduction to the History of Science* 1 (Baltimore 1927) 128–29.

[6]G. Pouchet, *La biologie aristotélique* (Paris 1885) 4.

[7]Lewes (above, note 5) 159–64.

[8]L. Bourgey, *Observation et expérience chez Aristote* (Paris 1955) 84–86.

[9]*HN* 11.273–74. Foerster (above, note 3) 1, p. LXXIII, note 2, observes that Hippocrates, *Epid.* 2.6.1, had stated that the long-lived have more teeth.

common ascription to Yaḥyâ ibn al-Biṭrîq (Johannes filius Patricii, obiit 815), has recently been queried.[10] Scot phrases as follows the statement whose fortunes we are tracing:

> Et cum illae lineae fuerint duae vel tres findentes totam palmam, significatur longitudo vitae, et cum fuerint duae breves, paucitas vitae.[11]

With the advent of "lines" the ambiguity of "articulations" has totally vanished. It would be impossible to determine whether it was Scot himself or one of his Semitic predecessors who changed Aristotle's "one or two" for the long-lived into "two or three" but, however that may be, the new and somewhat more plausible number was long in vogue thereafter.

In the year 1258 a certain Conradus de Austria attended the lectures which Albertus Magnus was giving in Cologne on Scot's translation of the *HA,* and his notes were in time expanded to form a treatise called *Quaestiones de animalibus.*[12] Here at last we find a physiological analysis: "It is next inquired whether long, clear lineations in the hands are signs of a long life and lines of an opposite nature, as short lines, of a shorter life. It seems that this is not the case. If the lineations are not clear it is a sign that the hand is well nourished (*bene referta*), and consequently this bears witness to the strength of the vital principle (? *hoc attestatur fortitudini virtutis*). Therefore short lines are not signs of shortness of life." The next paragraph is irrelevant and the editor properly regards it as an intrusion. "Likewise, in the palm of the hand there is much loose flesh (*multum de carne fluente*) but in the wrist there is much firm flesh (*multum de carne manente*). Now, moreover, nature is more concerned about flesh according to its kind (*secundum speciem*) than according to its substance (*secundum materiam*). When, therefore, the palm of the hand is well-lined, it is a sign that much flesh according to its kind is present there, because a hand is not much lined except as a result of great concern on nature's part. And when

[10]Sybil D. Wingate, *The Mediaeval Latin Versions of the Aristotelian Scientific Corpus* (London 1931) 72–77, gives the traditional ascription but it is now rejected by J. Brugman and H. J. Drossaart Lulofs, *Aristotle, Generation of Animals: The Arabic Translation commonly ascribed to Yaḥyâ ibn al-Biṭrîq* (Leiden 1971) 1–10. (The Arabic version comprised the *HA, PA,* and *GA.*) For Scot's life and career see L. Thorndike, *History of Magic and Experimental Science* 2 (New York 1923) 307–37.

[11]Scot's translation of the *HA* remains unpublished but E. Filthaut quotes the relevant passage, among others, in his edition of the Pseudo-Albertus (Conradus), *Quaestiones de animalibus* (*Alberti Magni Opera omnia,* 12; Monasterii Westfalorum 1955) 102, note 8. In his "Prolegomena," p. XLVI, Filthaut explains that he has drawn these portions of Scot's text from two manuscript sources.

[12]Edited by E. Filthaut (above, note 11). The facts about Conrad of Austria come from a subscription in the manuscript M (Bibliotheca Ambrosiana cod. H 44 inf.), printed by Filthaut in his "Prolegomena," p. XXXV.

nature is concerned about the extremities, it is a sign that she must be more concerned about the internal organs. And therefore a good, clear lineation in a hand is a sign of a plenitude in the members according to kind, and a meager lineation is a sign of a deficiency. And so the Philosopher says that clear lineations are a sign of long life, because there is present in them an abundance of the vital principles (*multum . . . de principiis vitae*) and contrariwise a lineation not clear, etc.—as has been said. All the rest is self-evident" (Liber 1, Quaestio 39, p. 102 ed. Filthaut). This of course is expressed in the formal style of the scholastic philosophy. The gist of the two ideas is, first (*contra*), that short, faint lines show that the hand is well nourished and such a hand can hardly belong to a person of short life-expectancy; and secondly (*pro*), that well-marked lines prove that nature has bestowed great vitality upon their possessor. These are the easy generalizations typical of those who imagined that natural science could be advanced by mere meditation, yet the text is interesting as a specimen of scientific thought in the thirteenth century.

Albert's lectures were apparently a preparation for the huge opus *De animalibus* which he finished a few years later (*c.* 1266–1269). He drew the subject-matter chiefly from Scot's translation based on the Arabic, though it has been thought that he may have made some use also of the version which William of Moerbeke had written, directly from the Greek, soon after the year 1260.[13] Albert explains, convincingly enough, that the lines in the wrist and hand are caused by the action of the joints, and he then continues:

> Et cum illae lineae duae sunt vel tres, totam palmam findentes, dicunt Physonomi quod significatur vitae longitudo.

This is a close if incomplete paraphrase of Scot's version, and the word *Physonomi* must refer, among others, to Scot himself, who composed an extant *Phisionomia*. "And one of these lines passes through the length of the palm and is caused by the bending of the thumb toward the inside of the palm. The second passes through the width of the palm, being caused by the bending of the index-finger[14] toward the inside of the hand, and it begins at the upper limit of the hand's breadth. The third begins at the lower limit of

[13]See Wingate (above, note 10) 82, 90. William's translation of *HA*, Book 1, was published by G. Rudberg as a part of his *Textstudien zur Tiergeschichte des Aristoteles* (Uppsala 1908). William turns the Greek thus: *Manus autem interius quidem vola, carneum et dearticulatum distinctione, longevis quidem una vel duabus per totum, hiis autem qui brevis vite duabus et non per totum.* The term *distinctio* instead of *linea* proves, if proof is needed, that here at least Albert was not using William's version.

[14]It is actually caused by the bending of all four fingers, and so it is called in German the "Vierfingerfurche." See Charlotte Wolff, *The Human Hand* (New York 1943) 132.

the same breadth, being caused by the curving of the little finger[15] toward the inside of the hand." We recognize here the three *lineae principales* which play a central rôle in the chiromantic treatises that had begun to appear well before Albert's time and have continued to appear ever since, though now fortunately in a decreasing number.[16] The lines in question are, respectively, the *linea vitae* or *l. dextra trianguli,* the *l. mediana* or *l. sinistra trianguli,* and the *l. mensalis,* which runs through the *mensa* or flat of the hand beneath the four fingers.[17] Albert resumes: "Since these symmetrical patterns are best completed by the formative virtue in the extremities far distant from the heart, it is a sign that the vital force present in the members near the heart exerts a strong influence upon the body and, with it, upon life itself. Moreover, this natural force is the cause of life and of the continuation of life for a long time. Where, however, there are two short lines, it means that the substance resulting from an unregulated and undefined humor is prevailing over the formative virtue and will thus shorten the span of life, because an undefined humor will do so by decaying prematurely."[18] At the end Albert applies the popular and indeed overworked humoral theory, but he is on firm ground when he tells how the mechanics of the hand normally produce three major lines. Although the palmists had described three or four major lines they had not, so far as we know, accounted for their origin in anatomical terms.[19] It was Albert's fate to be cited in his turn as an authority on both physiognomy and chiromancy, that specialized branch of it:

> Item Philosophus in secundo libro *De animalibus* de hac arte facit mencionem, dicens 'si linee manus sint longe, due vel tres scindentes totam manum vel palmam, significatur longitudo vite, breves vero paucitatem vite

[15]At least it "depends to a greater extent on the medius, ring and little fingers than on the index" says Wolff 134.

[16]An exception must be made for the study by Dr. Wolff (above, note 14), as it is a serious attempt to develop a genuine science of chirognomy documented by medical research. Of particular interest is the discovery that the hands and palms of the mentally retarded resemble in some features those of the lower primates. To cite two examples, the "lower transverse line" (the *mediana* of chiromancy) is called the "simian line" when it crosses the whole palm horizontally; and the "upper transverse line" (*mensalis*) is said to be lacking in monkeys and most apes because their index-fingers are much less flexible than ours: its absence in man often accompanies the simian line. (See Wolff 129–41 for the six major lines which she charts.)

[17]See the diagrams and "Glossary of Terms" in the edition of Pseudo-Aristotle, *Chiromantia* (*AHMA* 36 [1969] 189–241).

[18]*De animalibus,* Liber 1, tractatus 2, cap. 26.493–94, edited by H. Stadler, *Beiträge zur Geschichte der Philosophie des Mittelalters* 15 (1916) 176–77.

[19]Pack, *TAPA* 103 (1972) 369, note 12, points out that chiromantic tracts were circulating in Europe by the middle of the twelfth century, as shown by passages in Dominico Gundisalvi and John of Salisbury.

significant.' Item Albertus, qui fuit magnus philosophus, eam dicit sub sciencia naturali et sub phisonomia comprehendi.[20]

Theodore Gaza's Latin translation of Aristotle's *HA, PA,* and *GA* was first published at Venice in 1476. It became "the standard version of the Aristotelian zoological works throughout the Renaissance period and later."[21] He renders *verbatim:*

Pars interior manus vola dicitur; carnosa est et scissuris vitae indicibus distincta, longioris scilicet vitae singulis aut binis, ductis per totam, brevioris binis, quae non longitudinem totam designent.[22]

Scissurae in place of *articuli* reminds us of Pliny's *incisurae,* but the original number of lines for the long-lived is preserved, a warning that we must not try to correct the Greek. Though it is a commonplace that numerals were often corrupted by the scribes, our editions of the *HA* show no variants here that would give color to an emendation.

An eminent chiromancer of the fifteenth century was Antiochus Tibertus. Born at Cesena about 1445, he studied for a while in Paris, published *De chyromantia libri III* at Bologna in 1494, and in 1498 was beheaded, having given offence to Pandolfo Malatesta, the lord of Rimini.[23] His substantial treatise is of the planetary variety and it is followed by a series of related problems and their solutions, in the manner of the *Problemata.* To characterize this interesting work further would be to stray too far from the subject; enough, to note a passage in the first chapter:

De quibus (sc. divinis artibus) Aristoteles et ceteri sapientes scriptitarunt. De Chyromantia meminit primo de Historia animalium . . ., cum inquit 'Pars

[20]Pseudo-Aristotle, *Ars chiromantiae,* cap. 1 (*AHMA* 39 [1972] 309). Compare also Pseudo-Aristotle, *Chiromantia,* Tractatus1, cap. 1 (*AHMA* 36[1969]208), a text which seems reminiscent of Albert's physiology even though he is not mentioned by name. For an unpublished *Ars ciromancie* attributed to Albert see L. Thorndike and P. Kibre, *Incipits of Mediaeval Scientific Writings in Latin* (Cambridge, Mass. 1963[2]) 281. Since chiromancy was a subdivision of physiognomy, R. Foerster might well have included chiromantic excerpts in his "Sylloge locorum physiognomonicorum" (above, note 3) 233–352. The relation between the two sciences was commonly recognized. See, for example, Auctor Incertus, *De physiognomonia* 12 (*AHMA* 41 [1974] 130): *Solet tamen ciromancie doctrina certam fortunarum investigare noticiam, hec autem in manuum linearibus constat indiciis; quam alibi diligenter exposuimus.* Iodocus, *Regule phisonomie* (unedited, saec. XV), Regula specialis 21, de manibus: *Hic currit ciromancia, que est prohibita, ergo a nobis relinquenda.*

[21]Wingate (above, note 10) 127.

[22]*Aristotelis Opera cum Averrois commentariis,* vol. 6 (Venice 1562–1574; reprint, Frankfurt-am-Main 1962), including *Theodori Gazae Thessalonicensis in Libros Aristotelis de animalibus,* cap. 15. (The edition of 1476 was not available.)

[23]See Thorndike (above, note 10) 5 (New York 1941) 54–55, and G. Sabattini, *Bio-Bibliografia chiromantica* (Reggio Emilia 1946) 92–94.

> interior manus vola dicitur; carnosa est et [in] scissuris vitae indicibus distincta, longioris scilicet vitae singulis aut binis ⟨ductis per totam, brevioris binis⟩, quae non longitudinem totam designent.'

As printed in the edition of 1538[24] the text is marred by a haplographic omission but it is easily supplied from Theodore Gaza's translation, from which it must have been derived.

In the early years of the sixteenth century Giovanni Francesco Pico della Mirandola (1470–1533) published at Strasbourg a lengthy tract, entitled *De rerum praenotione,* in which he undertook to refute, point by point and with vigorous polemics, the claims of the physiognomists, palmists and other diviners. His argument, paraphrased to strip it of verbosity, runs about as follows. The chiromancers will assert that Aristotle, the natural philosopher *par excellence,* endorses physiognomy in his *Physiognomonica,*[25] *Problemata,* and *Historia animalium.* "Why does he mention palmistry as well, if it is a superstition and not an art? Further, he teaches that the lines in the palm foretell length of life." Yet anyone who examines his views will find that he really gives no encouragement at all to such vanity. He never favored the palmists or assumed the patronage of their superstition, but he was concerned mainly to teach that the joints of animals consistently signify long life if they are large, and the point about well-marked lines in the hand occurred to him simply as a supporting example or analogy. Similarly, he maintained in the *HA* that length of life depends upon an abundance of blood. But these ideas belong to a natural, not a superstitious form of prognostication. Aristotle refers to the lineation in the palm only as a means of clarifying his doctrine about the size of the joints. It was his general practice to cite obvious examples in order to elucidate what he had written in a condensed fashion; and what is more obvious than the hand with its articulations and lines? For the same purpose he frequently rehearses doctrines which belong to others and not himself, which are generally known and even trite. He thought that the linear or articular principle was in keeping with both nature and reason. Pico then quotes it:

> Si multae in manu incisurae nec perpetuae fuerint, brevitas vitae de longinquo iudicetur, contraque diuturnitas, si paucae atque perpetuae.[26]

The phrasing echoes that of Pliny, and when Pico proceeds to combat the

[24]This edition, the only one available to the present writer, was edited by Ioannes Dryander (Marburg 1538). It has the colophon of the first edition (Bologna 1494) reprinted at the end.

[25]This of course refers to the spurious treatise so entitled. The text can be found in Foerster (above, note 3) 1.1–91.

[26]Pico's critique is presented in the Appendix, below. For an estimate of this tract see Thorndike (above, note 10) 467–69.

notion that few teeth and a leaden complexion portend an early death he is still relying on Pliny. But since he has read the *Problemata* also, the idea of "articulations" is strong in his imagination.

Finally, in 1557 the mathematician and astrologer Girolamo Cardano (1501–1576) published *De rerum varietate,* in which he considers this problem: whether or not the many new lines which appear in old age truly reveal the influence of the planets.[27] His solution appears to be that these are only meaningless wrinkles which must be carefully distinguished from the few significant lines present even in the palms of children. He continues: "Aristotle, further, said that three long lines are a sign of length of life. They are not caused by wrinkles alone unless we are to say that persons with many wrinkles are long-lived. But why did he not say 'four'? Evidently he passed over the line of the liver, because this is found in a fleshy area of the palm and it is rarely without creases, rarely clear, continuous, and deep, like the other lines."[28]

So ends this small contribution to the history of chiromancy.[29] Of the texts that have been passed in review, the most important is that of Albert the Great, with its anatomical approach, or perhaps that of Pico della Mirandola, with its healthy skepticism. The question about this or that

[27]The self-styled "Almadel," in his *De firmitate sex scientiarum* (*AHMA* 42 [1975] 147–81), argued that chiromancy reposes upon a firm base because it tells how the planets affect the destiny of man.

[28]*Hieronymi Cardani Mediolanensis Medici De rerum varietate Libri XVII* (Bâle 1557) 15.79 (p. 979). The line of the liver (*linea iecoraria* or *hepatica*) is explained earlier: it is the one that passes from the wrist toward the little finger when it is present but some palms lack it entirely. For an appraisal of Cardano's voluminous writings see Thorndike (above, note 10) 5.563–79.

[29]It is believed that the texts cited in this sketch are those of greatest importance, though the subject has not been quite exhausted: a little more could possibly have been gleaned from, for example, the translations of the *HA* by George of Trebizond (Georgius Trapezuntius) and the Cardinal Bessarion, if their works had been accessible in print. Commentators on the *HA* are in any case far less numerous than those on the other components of the Aristotelian corpus, as one can learn not only from Wingate's study (note 10, above) but also from A. Wartelle, *Inventaire des manuscrits grecs d'Aristote et de ses commentateurs* (Paris 1963) 183–98, and C. H. Lohr, "The Medieval Latin Aristotle Commentaries," *Traditio* 23 (1967) 313–413, 24 (1968) 149–245, 27 (1971) 251–351, 28 (1972) 281–396. Thorndike (note 10, above) 5.673–78, gives a list of treatises on chiromancy preserved in manuscripts and incunabula. Most of the former have not been published, while the latter are naturally rare and often inaccessible. But it is reasonable to assume that their authors for the most part did not reject Aristotle's principle. Cornelius Agrippa (obiit 1535) does not refer to it, as he might well have done, in his tract *De incertitudine et vanitate scientiarum et artium atque excellentia verbi Dei declamatio* (Antwerp 1531) folios 49^{v}–50^{v}, where he discusses physiognomy, metoposcopy, and chiromancy.

number of lines is a minor riddle to which none of the commentators seems to have offered a final solution.[30]

[30]Thanks are due to the Association's referee for some helpful comments. He suggests (*inter alia*) that *plures* in Pliny, *HN* 11.273, might mean merely "more than one." This seems a welcome possibility, though H. Rackham has "an exceptional number" and A. Ernout translates "des lignes nombreuses."

APPENDIX

G. F. Pico della Mirandola versus the Chiromancers

Since the early printing from which this text has been taken is somewhat rare, it seems desirable to present it here in full. The punctuation has been modernized and a few corrections have been proposed. The siglum *ed.* stands for *Ioannis Francisci Pici Mirandulae . . ., De rerum praenotione libri novem . . .* (Strasbourg, J. Knoblochus, 1507), 6.2, Adversus chiromantiam et quampiam phisionomicae professionis partem.

At inquient fortasse (sc. chiromantes): "Cur Aristoteles, inter philosophos naturales summus auctor, si haec non ars sed superstitio ⟨est?⟩, eius tamen meminit, sicuti et physionomiae adstipulatur et dicato opusculo et in *Problematis* et in opere *De natura animalium,* tum illud inter alia docet, longinquitatem vitae ex lineis volae portendi?" Atqui, si ⟨quis⟩ Aristotelis perpendat (perpendantur *ed.*) sensa, tam ea chiromantiae vanitati favere iudicabit quam quae omnino nihil[1] de physionomia postea dicemus. Nunc, quid ille chiromantibus faverit, videamus. Numquam ille superstitionis huiusce patrocinium sumit (summit *ed.*, *an* sumpsit?). De articulis enim animalium loquens, ex eis, si magni (magna *ed.*) sint, vitae magnitudinem consentanea ratione significari docuit, illudque occurrit exemplum: cum ex incisione manus per lineas eius membri partes dirimantur, fieri ut eius (*ed. addit* .s., scilicet) vita extendi facile posse credatur cui magnos et extensos inesse artus conspicimus. Pari pacto in opere *De animalibus* longinquitatem vitae ex multitudine sanguinis pronuntiavit. Sed ad naturalem haec, ut diximus, non superstitiosam praenotionem pertinent (pertinet *ed.*), sicuti et dogma de membrorum magnitudine, cuius declarandi gratia volae per lineas partitionis meminit. Ita enim apud eum mos ⟨erat?⟩ ut, quae in propatulo essent, pro exemplo sumeret (summeret *ed.*), quo magis nota fierent quae presse et constricte

[1]*quam quae omnino nihil* seems to be a condensed phrasing of *quam ea omnino nihil favent quae,* etc.

protulerat. Quid autem magis expositum, magis in ore (ora *ed.*) omnium quam manus, quam eius articuli suis quisque lineis abiuncti? Adde quod frequenter ea pro manifestatione proponit quae non illius sed aliorum dogmata sunt, vulgo alioquin nota atque protrita. A natura igitur et ratione non abhorrere putavit ut "si multae in manu incisurae nec perpetuae fuerint, brevitas vitae de longinquo iudicetur, contraque diuturnitas, si paucae atque perpetuae."