

gold, which chiefly consisted in embossing gold-plates, and inlaying gold-wire, is closely connected with this branch of art.

1. Τορευτική (§. 85.) corresponds completely to *cælatura* (Plin. xxxiii. Salmas. Exerc. Plin. p. 737.), which Quintillian ii, 21. confines to metals, whereas sculpture comprehends besides, wood, ivory, marble, glass and gems. [Thrones of ivory, therefore, should not be mixed up, §. 173, 1.] Embossing is ἐλαύνειν (Creuzer Comm. Herod. p. 302.), ἐκκρούειν §. 59. R. 2., χαλκεύειν, excudere (Quint. ibid.). Isidore Orig. xx, 4. Cælata vasa signis eminentibus intus extrave expressis a cælo quod est genus ferramenti, quod vulgo cilionem vocant. *Tritor argentarius* (Spon. Misc. p. 219.), *tritum argentum* (Horace s. i, 3, 91. Phædr. v, 1, 7.) appear to refer to embossing. Terere is πορεύειν.

2. Comp. R. 3. 4. There were figures, insects, foliage enchased on Glaucus' crater-stand (§. 61.). At Kibyra, in Asia Minor, iron was engraved with ease, Strab. xiii, 631. Alexander's iron helmet, a work of Theophilus, gleamed like silver, Plut. 32. To this refers βαφή σιδήρου in Soph. Aj. 651. cf. Lobeck, on the softening [Götting. Anz. 1838. S. 1111: "But there must have been a similar, though less known process, whereby iron was made suitable for embossing and enchasing.—The μάλαξις of Glaucus was διὰ πυρός καὶ ὕδατος βαφήν, from which, indeed, one would rather expect the opposite effect." (Indeed.) In the Hall. ALZ. 1837. also, Apr. S. 634 f. ἐσηλύνθη is combined with βαφή σιδήρου ὡς. The reference of these words to ἐκαρτέρουν is preferable; for it is not said that the quenching in oil makes iron soft, but only that it prevents splitting.]

3. On artistic workmanship of armour, §. 58. 59. 116, 3. 117, 2. 240. R. 4. Cic. Verr. iv, 44. mentions bronze coats of mail and helmets enchased in the Corinthian manner. The γραπτὰ ἐν ὄπλῳ ἐγχρῦσῳ εἰκῶν (Inscr. from Cyme, Caylus Rec. ii, 57., comp. Osann. Syl. p. 244. C. I. n. 124.) I hold to be the same with the *scutum chrysographatum* (Trebell. Claud. 14.). May not the χρυσογραφία of the Egyptian papyrus, Reuven's, Lettres à Letr. iii. p. 66. perhaps refer to this? [Letronne Lettres d'un antiq. p. 517. dissents.] εἰκῶν γραπτῆ see C. I. Gr. ii, p. 662. s., εἰκόνων ἐνόπλοις ἐπιχρῦσοις ἀνάθεσις ib. no. 2771. [Engraved work, Gerhard Etr. Spiegel. S. 80 Not. 63.] The barbicarii of later antiquity were also employed in inlaying metal with threads of gold and other metals, see Lebeau, Mém. de l'Ac. des Inscr. xxxix. p. 444. In preserved armour with reliefs, the mail-plates from Locri §. 257. R. 4, and the bronze helmets (with military representations) and greaves from Pompeii are worthy of remark. Votive shield (?) of the Ardaburia family, see §. 424. R. 2. Massieu Sur les boucliers votifs, Mém. de l'Ac. des Inscr. i. p. 177. Of work on chariots §. 173, 2. Carrucæ ex argento cælatae, Plin. xxxiii, 49. Vopisc. Aurel. 46. [On bronze reliefs, as facing of wooden boxes, &c. Avellino Descriz di una casa Pompeiana. 1837. p. 57 sqq.]

4. To the first sort belong the *lances filicatae*, Cic., *disci corymbiati*, *lances pampinatae*, *patinae hederatae*, Trebell. Claud. 17. It appears likewise that animals' heads, masks, wreaths and the like, but no historical reliefs, were fixed on the Corinthian bronze vases. But the golden κρατήρες Κορινθιοργεῖς, in Athen. v, 199 e. had round figures, ζῶα περιφανῆ τετο-

γευμένα, sitting on the rim (similar figures on tripods, Amalth. iii. s. 29.), and reliefs on the neck and belly.—Cic. Verr. iv. 23. distinguishes on silver vases the crustæ aut emblemata. The cælator anaglyptarius in inscriptions made in later times merely the reliefs, the vascularius the vase, the purum argentum. Homeric subjects were much in favour, thus Mys (§. 112. R. 1. 116, 3.) represented on a Heracleotic scyphos the conquest of Ilium after Parrhasius' design [the epigram in Athen. names Πηγάσιος, cf. Meineke Spec. alt. p. 20. Sillig Catal. artif. p. 288.]; hence the scyphi Homerici, Sueton. Nero, 47. [One in the Antiquarium at Munich, published by Thiersch in the Abhdl. of the Mun. Acad. v, 2. 1849.] A platter with large historical representations, Trebell. Trig. 32. Masters in working vessels §. 60. 122. R. 5. 124. R. 1. 159. 196, 3. comp. Athen. vi, 781 sq.

5. The most important silver vessels are: the cup in the Corsini collection, found at Antium §. 196. R. 3.; the vase with the apotheosis of Homer, at Naples, Millingen Un. Mon. ii, 13. [Millin Gal. Mythol. pl. 149.] silver vessels found in Pompeii, 14 articles, Archäol. Intell. Bl. Hall. 1835. No. 6.; the so-called shield of Scipio (restoration of Briseis), found in 1656 at Avignon, in the cabinet at Paris, Montfaucon iv, 23. Millin M. I. i, 10 [A. G. Lange in Welcker's Zeitschr. f. a. K. Tf. vi, 22. S. 490.]; the bowl found in Perm in Stroganow's collection, the contest for the armour of Achilles, see Köhler, Mag. encyc. 1803. v. p. 372 [Archäol. Zeit. of Gerhard i. Tf. 10. S. 101]; the goblet from Aquileia, at Vienna, §. 200. R. 2. comp. 264. R. 1; the vases from Falerii (with vegetable decorations), Al. Visconti, Diss. d. Acc. Rom. i, ii. p. 303 sqq. especially the rich treasure in vessels of a temple of Mercury, found at Bernay. The raised work in these is invariably embossed, and drinking-bowls placed inside; drapery and armour enhanced by gilding, as is also often the case elsewhere; on the Homeric representations §. 415. R. Rochette, Journ. des Sav. 1830. p. 417. Lenormant, Bull. d. Inst. 1830. p. 97. The so-called *disci* also are for the most part merely the inner surfaces of goblets. A silver discus, Cleopatra with her women (?), from Pompeii, Ant. Ercol. v. p. 267. Another found at Geneva with figures in glorification of Valentinian, Montfaucon Suppl. vi. pl. 28. On a Christian one, Fontanini, Discus argent. R. 1727. [One from a tomb at Kertsch in half barbaric and half Grecian design, in Gerhard's Archäol. Zeit. i. Tf. 10. s. 161. One Anacreontic. 51.] In bronze there is nothing finer than the discus from near Paramythia in Epirus, in Hawkins' possession, highly embossed figures inlaid with silver ornaments, representing Aphrodite's visit to Anchises, Tischbein Hom. vii, 3. Millingen Un. Mon. ii. 12. [Specim. ii, 20.] On the entire discoveries, Gött. G. A. 1801. s. 1800. [Argenti M. Gregor. i, 62—66.]

6. Silver casket with a considerable silver treasure found at Rome in 1794, of the last period of art, in the Schellersheim (now Blacas) collection, Mag. encyc. 1796. i. p. 357. E. Q. Visconti, Lettera intorno ad una ant. supellettile d'argento. Sec. ed. 1827. In golden ornaments (to which belong the early Attic cicadae) there have been important discoveries made in Ithaca (Hughes i. p. 161.); at Rome among others in 1824 (G. Melchiorri, Mem. Rom. iii. p. 131.); at Parma (Diss. d. Acc. Rom. ii. p. 3.); at Canosa (rich golden chaplet, Gerhard, Ant. Bildw. 60. Avellino,

Mem. d. Acc. Ercol. i.), [now in Munich]; at Panticapæon, masks and medallions of thin gold leaflets embossed (R. Rochette, Journ. des Sav. 832. p. 45), [other gold articles also from thence Dubois de Montpéreur, Voy. en Crimée au Caucase cet. pl. 20. 21, and silver vessels pl. 23. 24, also vases of amber pl. 22.] These medallions were still in request in later antiquity (see that of Tetricus, Mongez Icon. Rom. pl. 58, 6); such were perhaps wrought by the *bractearii aurifices*. On the aurifices generally, Gori, Columb. Liv. n. 114 sqq. [Gold articles from a rich tomb in Melos, L. Ross Inselreise iii. S. 18. One of the finest golden chaplets in the possession of Barone at Naples in 1845, recently found at Fasano, described by Avellino. Bull. Napol. iii. 129. In inscriptions there are golden honorary garlands mentioned of 100 gold pieces, 500 drachmas, &c. and in incredible number, besides the crowns decreed to be consecrated in temples, for example in that of Jupiter in Plautus Menæchm. v. 5, 38, very many only representing olive-leaves. Etrurian gold articles S. 175. R. 4.] Vase of lead with Bacchus, Silenus and the four seasons, Gerhard Ant. Bildw. i, 87.

312. In the studios of the ancients, with the toreutic art 1 was likewise connected WORKING IN IVORY, which it was a favourite practice throughout antiquity to combine with gold, in statues as well as all sorts of furniture. The ancients re- 2 ceived from India, but especially from Africa, elephants' teeth of considerable size, by the splitting and bending of which—a lost art but which certainly existed in antiquity—they could obtain plates of from 12 to 20 inches in breadth. In executing a statue, then, after the surface of the model was distributed in such a way as it could best be reproduced in these plates, the individual portions were accurately represented by sawing, planing and filing the ivory (this material being too elastic to be wrought with the chisel), and afterwards joined together especially by the aid of isinglass, over a kernel of wood and metal rods. The holding together of the pieces of ivory, however, required incessant care; moistening with oil (particularly *oleum pissinum*) contributed most to their preservation. The gold, which represented hair and drapery, was embossed and fixed on in thin plates. In ivory, besides reliefs, little figures, 3 small utensils and tokens, and especially the class of *diptycha* (writing tablets with reliefs on the outside) have come down to our times from the later Roman empire. These are divided into consular, which were presented by magistrates as gifts on entering office, and ecclesiastical.

1. In opposition to the employment of the term introduced by Q. de Quincy, it is correctly remarked by Welcker that *τορευτική* among the ancients merely signifies *caelatura*; we nowhere find the word expressly used of chryselephantine statues. As however the embossing of gold was in these a main feature, and the first masters who made these colossi, Phidias and Polyclète, were also according to Pliny the most eminent toreutæ (§. 120. R. 2.), we must perhaps adhere to the connexion above

indicated. On chryselephantine works, see above §. 85. 113—115. 120, 2. 158. R. 1. 204. R. 5. comp. 237. 240. Χρυσσελεφαντήλεκτροι ἀσπίδες at Syracuse, Plut. Timol. 31.; on the doors of the temple of Pallas there (§. 281. R. 6.) the *argumenta* or representations of events were of ivory, the rest of gold. Lyres were often of ivory and gold, and crowns of ivory, gold and coral, Pindar, N. vii, 78. Dissen in Böckh, p. 435. Ivory countenance on a shield, Diogen. viii, 1, 5. Signa eburnea in Sicily, Cic. Verr. iv, 1., in Rome at the Circensian games, Tac. Ann. ii, 83.

2. The above sentences give Q. de Quincy's theory, which is the most probable, p. 393 sq. Comp. Heyne, Antiq. Aufs. ii. p. 149., in the N. Biblioth. der schönen Wiss. xv., and N. Commentar. Soc. Gott. i, ii. p. 96. 111. On the ivory trade, Schlegel Indische Biblioth. i. s. 134 sqq. In Phidias' time chiefly from Libya, Hermipp. in Athen. i. p. 27, as afterwards from Adule, Plin. vi, 34. Democritus is said to have invented the mode of softening ivory, Seneca, Ep. 90. Q. de Quincy, p. 416. Comp. §. 113. R. 1. In the working, Lucian De conscr. Hist. 52. distinguishes the πλάττειν (of the model), the πρίειν, ξέειν (*radere*, Statius, S. iv, 6, 27.), κολλᾶν, ῥυθμίζειν of the ivory, and the ἐπανθίζειν τῷ χρυσοῦ. Isinglass served to unite the parts which Damophon renewed in the Olympian Zeus, Ælian V. H. xvii, 32. On the oil, among others Methodius in Photius, C. 234. p. 293. Bekk. On the kernel of statues, especially πηλός, Lucian, Somn. s. Gall. 24. Arnob. vi, 16. §. 214. R. 2. On the application of the gold, §. 113. R. 2., eyes of precious stones, Plat. Hipp. i. p. 290.

3. Most reliefs and figurettes of ivory in Buonarroti, Medagl. Antichi. [Knebel De signo eburneo nuper effosso. Duisburg 1844. 4to. A hero carrying a dead body.] There are also early Greek works of the kind. The ἐλεφαντουργοί, *eborarii*, according to Themistius, p. 273, 20 Dind. made chiefly δέλτοι, *libri elephantini* (Vopisc. Tac. 8.) or *pugillares membranacei operculis eboreis* (Inscr.). The *diptycha consularia* are adorned with the figures of consuls at the *pompa circensis*, the *missiones* and the like, the *ecclesiastica* with biblical subjects. Besides those of ivory there were also wooden ones, likewise *argentea cœlata*, of which there are some remains. Also *triptycha*, *pentaptycha*, etc. Writings by [M. Chladni, J. A. Schmidt, Negelein] Salig and Leich *de diptychis Donati De' dittici*. Coste Sur l'origine des Diptyques consulaires, Mag. encycl. 1802. iv. p. 444. 1803. v. p. 419. Principal work: Gori, Thesaurus vett. Diptychorum consularium et ecclesiasticorum, opus posth. cum add. I. B. Passeri. F. 1759. 3 vols. fo. Particular ones described by Fil. Buonarroti, Chph. Saxe [Dipt. magni consulis 1757.], Hagenbuch [de dipt. Brixiano, 1799 fol.], Mautour (Hist. de l'Ac. des Inscr. v. p. 300.) and others. [De Dipt. Quirini Card. Lips. 1743. 4to.] Paradise on an ivory tablet, Grivaud de la Vinc. Ant. Gaul. pl. 28. The Wiczay Diptychon, engraved by R. Morghen, with the figures of Esculapius and Telesphorus, Hygieia and Eros, is distinguished from the usual Byzantine dryness by more ingenious workmanship.

The teeth of hippopotami likewise served instead of ivory, Paus. viii, 46, 2. Tortoise-shell (chelyon) was used especially for lyres, dining sofas and other furniture; it also came partly from Adule, Plin. vi, 34. Reliefs of the bones of animals. Works in mother-of-pearl, Sueton. Nero 31. There were statuette in amber (§. 56. R. 2.), Paus. v, 12, 6. Plin. xxxvii,

12., but particularly vases [Martial iv, 31. vi, 59], *Heliadum crustæ* (Juv. v, 40.), among which the *electrina vasa*, Dig. xxxiv, 2, 32., and the *electrina patera* with Alexander's medallion and history, Trebell. Trig. 14., may perhaps be rather classed than regarded as vessels for mixing metals. [Other manufactures of amber, Dilthey de Electro et Eridano, Darmst. 1824. p. 13. fol.] The Ἀθηναῖ ἠλεκτρίνη in a *fibula*, Helioid. iii, 3. is likewise a fitting application of amber [scarcely, cf. Dilthey p. 7—9.]; there are still ancient amber buckles with Gorgonea (at Berlin); also early Greek and Etruscan sculptures in that material, Micali, Ant. Mon. tv. 118. Clarac, p. 82. Cab. Pourtalès pl. 20. p. 24. [Collections of the Duke S. Giorgio Spinelli and Mr. Temple at Naples, single specimens not rare. D. Schulz on Amber works, in the Bull. 1842. p. 38.]

D. WORKING IN PRECIOUS STONES (SCALPTURA).

313. The work in precious stones is either depressed (in- 1  
taglio) or raised (ectypa scalptura in Pliny, came-huia, cama-  
yeu, cameo). The impression (σφραγίς) is the main object of  
the former; the chief aim of the latter is to adorn. For the 2  
former were employed transparent stones of uniform colour,  
but likewise such as were spotted and clouded, of precious  
stones properly so-called almost only the amethyst and hya-  
cinth, on the contrary many half precious stones, especially  
the numerous varieties of the agate, among these the highly  
esteemed cornelian, the chalcedony and the *plasma di smeraldo*;  
for the latter, variegated stones, such as the onyxes, consisting 3  
of smoky brown and milk-white layers (*zonæ*), and the sar-  
donyxes, which added a third layer of cornelian, and were  
frequently also produced by artifice, with similar kinds of  
stones which Oriental and African commerce brought to the  
ancients, of surprising and now unknown beauty and size.

1. The impression ἐκμαγεῖον, ἀποσφράγισμα, ἐκτύπωμα, also σφραγίς, in *sigillaris creta*, especially Lemnian, or wax.

2. According to the ancients the diamond cannot be cut (Pinder de adamante, p. 65.); there are hardly any genuine antiques of it. The *ardentes gemmæ* likewise, such as the *carbunculi*, according to Pliny xxxvii, 30. resist working and cling to the wax, however (Theophrastes de lap. 18. knew of *sphragides* of anthrax). It was not so with the *hyacinthus*, our amethyst, of dull violet colour, and the more muddy and spotted *amethystus*; the greenish *topazium* (not chrysolite, according to Glocker, De gemmis Plinii, in primis de topazio, 1824.); the *beryllus*, now *aquamarina*; above all the *sarda*, σάρδιον, now cornelian and sard, which was very common in the time of Menander; the *achates*, which was formerly in high favour, but in Pliny's time however had lost its repute; the *leucachates*, now chalcedony; the *jaspis*, especially the tile-coloured (untransparent); the *cyanus*, to which the *sapphirus* of the ancients was allied, now lapis lazuli; our sapphire, on the contrary, *adamas Cyprius*, did not make its appearance till later times, §. 207. R. 7. The emerald

of the ancients is in general *plasma di smeraldo*, which came chiefly from the mines between Coptus and Berenice, which have been recently reopened. There were also fine works in crystal. Obsidian was an Ethiopian stone which was counterfeited in lava-glass, *obsidianum vitrum*. Caylus, Fabroni d. gemma Obsid., Blumenbach Comment. Soc. Gott, rec. iii. p. 67. For stones generally, see, above all, Haüy, *Traité des caractères physiques des pierres précieuses*. P. 1817. 8vo. Corsi, p. 222 sqq.

3. The sardonyx is called  $\Psi\eta\phi\omicron\varsigma$  τῶν τριχρῶμων, ἐρυθρὰ ἐπιπολῆς, Lucian dial. mer. ix. 2. Sardonyches ternis glutinantur gemmis;—aliunde nigro, al. candido, al. minio. Plin. 75. comp. 23. Achill. T. ii, 11. Schol. ad Clem. p. 130. Works by Köhler and Brückmann on the subject (1801—1804). Pliny also mentions (63) other oriental stones of several colours, quæ ad ectypas sculpturas aptantur. The bluish *nicolo* (onicolo) consisting of two layers was used for intaglios. The ancients recognised especially Upper India and Bactria as the native country of cameo-stones, Theoph. De lap. §. 35. Comp. Gr. Veltheim, *Sammlung einiger Aufsätze* ii. s. 203. Böttiger, ueber die Aechtheit und das Vaterland der antiken Onyx-Cameen von ausserordentlicher Grösse. Leipz. 1796. Heeren, *Ideen* i, 2. s. 211. Luc. de Syr. dea 32. mentions that there were on the image of the goddess many precious stones, white, water-coloured, fiery sardonyxes (ὄνυχες Σαρδῶοι), hyacinths, and emeralds which had been brought thither by Egyptians, Indians, Ethiopians, Medes, Armenians, and Babylonians.

1 314. Now, with regard to the mode of working, we only know from antiquity this much, that the polisher (politor) first gave to the stone a plane or convex form, which was  
2 preferred especially for signet-rings; then the stone-cutter (sculptor, cavarius) attacked it partly with iron instruments smeared with Naxian or other emery and oil, which were sometimes round, sometimes pointed and drill-formed, but  
3 partly also with a diamond point set in iron. The adjustment of the wheel, by which the instruments were set in motion, whilst the stone was held to them, was probably similar in  
4 antiquity to what it is now. The careful polishing of all parts of the engraved figures was a great aim with the ancient stone-engravers, and is therefore a criterion of genuineness.

1. Λιθοτριβικὴ and λιθοουργικὴ, the art of the *politor* and *sculptor* in Lysias' *Fragm. περὶ τοῦ τύπου*. On the Latin names, Salmas. *Exerc. Plin.* p. 736. comp. Sillig C. A. p. viii. We do not find the numerous facets of modern art among the ancients; hexagons and cylinders were the favourite forms for ornaments.

2. Plin. xxxvii, 76. Tanta differentia est, ut aliæ ferro scalpi non possint, aliæ non nisi retuso, verum omnes adamante: plurimum vero in his terebrarum proficit fervor. The *ferrum retusum* is the punch, *boutetrolle*, whose round hollowings did the most in the coarser works, §. 97, 3. On *cælum* and *marculus*, Fronto, Ep. iv, 3., on the *lima* likewise Isidor. *Orig.* xix, 32, 6. The Naxian dust §. 310, 3., served for cutting and polishing, according to Pliny xxxvi, 10., comp. Theoph. 44. On *σμίρις*, emery, Dioscor. v, 165. [Hesych. v. *σμίρις*, Isid. xvi, 4, 27. smir Jerem.

xvii, 1. Ostracite used for gnawing, Veltheim Ueber Memnons Bilds. S. 40 ff.] Schneider ad Ecl. Phys. p. 120. and in the Lex. Plin. xxxvii, 15: Adamantem cum feliciter rumpere contigit, in tam parvas frangitur crustas, ut cerni vix possint; expetuntur a scalptoribus, ferroque includuntur, nullam non duritiam ex facili cavantes, speaks evidently of the diamond point, Pinder *de adam.* p. 63. comp. on the splinters of the ostracitis, Plin. 65. Veltheim Aufsätze ii. s. 141.

On the technical processes of the ancient stone-cutters: Mariette, *Traité des pierres gravées.* P. 1750. f. Natter, *Traité de la méthode ant. de graver en pierres fines comparée avec la méth. moderne.* L. 1754. Lessing in the *Antiq. Briefen* i, 103 ff. [Br. 27. S. 209 ff.] and in the *Kollectaneen zur Literatur.* Bd. i. ii. Ramus von geschnittenen Steinen und der Kunst selbige zu graviren. Kopenh. 1800. Gurlitt, *Gemmenkunde, Archæol. Schr.* herausgeg. von Corn. Müller, s. 87 f. Hirt, *Amalth.* ii. s. 12.

315. Stones destined for signet-rings next came into the hand of the goldsmith (compositor, annularius) who set them, and here the form of the sling (*σφενδόνη*, pala) was a favourite one. Although in the signet-ring the device was certainly the principal thing, the name however is sometimes added; and here it must be assumed, that a name which readily strikes the eye, must rather be referred to the possessor, than to the artist, of the gem. The circumstance that not merely individuals, but states had their seals, perhaps explains the great correspondence of many gems with coin-types; thus also the Roman emperors sealed with their heads, at the same time that their coins were stamped with them. The frequent application of engraved stones to the decoration of drinking-cups and other utensils [a practice derived from Byzantium], was continued down to the middle ages; even now antique gems must be sought for sometimes in church-vessels. In engraved vessels entirely of gems, which are connected with the class of large cameos, many works, admirable for the extent and difficulty of the workmanship, have been preserved, although none of them belongs to the times of a pure taste, and a genuine Hellenic exercise of art.

1. See among others Eurip. *Hippol.* 876. *τύποι σφενδόνης χρυσηλάτου*, comp. Monck.—All rings were at first signet-rings (comp. §. 97, 2); then they became ornaments and badges of honour, un-engraved also were readily worn, and the engraved everywhere else applied. Kirchmann *De Annulis.*

2. On the names on gems, v. Köhler and R. Rochette, see §. 131. R. 2., comp. §. 200. R. 1. *Gemmæ ant. litteratæ* by Fr. Ficoroni. R. 1757., by Stosch, §. 264. R. 1. *Bracci Comm. de ant. scalptoribus, qui sua nomina inciderunt.* F. 1786. 2 vols. text, 2 plates. It is certain, indeed, that when the artist gave his name he did it in the least observable manner possible. Hence the catalogues of gem-cutters, of which the Visconti-Millin (*Visconti, Varie Opere*, T. ii. p. 115. Millin, *Introduction à l'étude des pierres gr.* P. 1797. 8vo.) is the richest, furnish little

that is available for the history of art. Many names rest merely on a different reading, as Pergamus and Peigmus; Dalion and Allion are probably Admon (ΑΛΛΙΟΝ), comp. Journ. des Sav. 1833. p. 753 sq. Besides those above named, we also know, from Pliny, Apollonides and Cronius; of the former we have perhaps still a fragment. The Tryphon celebrated by Addæus of Mitylene, Brunck Anal. ii, 242., is perhaps the same whose name stands on several beautiful stones; however even Addæus' time is uncertain.

3. See on the state-seals Facius' Miscel. 72. On the imperial seals Sueton. Aug. 50. Spart. Hadr. 26. U. Fr. Kopp, ueber Entstehung der Wappen. 1831.

4. See §. 161, 1. 207, 7. also 298. R. 1. Gemmata patoria, Plin. xxxvii, 6. [vasa ex auro et gemmis xxxvii, 63, gemmata vasa of Agathocles, Auson. ep. 8.] Juv. x, 27., from which are also to be explained Juv. v, 43. and Martial xiv, 109. Ψυκτῆρες διάλιθοι, Plut. vii. p. 154. H. lances, phialæ with gemmæ inclusæ, Dig. xxxiv, 2, 19. Comp. Meurs. de luxu Rom. c. 8. T. v. p. 18. [The λιθοκόλλητα §. 161. R. 1. were even in use at Babylon §. 237. R. 2, among the Indians also golden vessels set with precious stones occur Bhartrihari's Sententiæ ed. Bohlen ii, 98. Doors, walls, roofs with gold, silver, and precious stones also among the Sabæans, Strab. xvi. p. 778. Stones from Bactriana, which were used in λιθοκόλλητα, Theoph. π. λίθ. §. 35. At the Persian court κλίνας λιθοκόλλητοι καὶ ὀλόχρυσοι, Philo in Euseb. Pr. ev. viii. p. 389 a. A dove λιθοκ. in the possession of Cyrus, Ælian V. H. xii, 1. Φολὶς λιθοκ. on the hearse of Alexander Diod. xviii, 26., at a symposium Cleopatra gave to Anthony πάντα χρύσεια καὶ λ. περιττῶς ἐξεργασμένα ταῖς τέχναις, Athen. iv. p. 147 sq. Ἡ ἱερὰ Φιάλη ἐκ χρυσοῦ δεκατάλαντος διάλιθος made for the triumph of Paulus Æmilius. Plut. Æmil. P. 33. Pompey triumphed in a ἄρμα λ. Appian. B. Mithrid. 117. Into his hands fell at Talaura, Mithridates' treasury of art (ταμιεῖον τῆς κατασκευῆς), besides 2,000 onyx vessels, Φιάλαι καὶ ψυκτῆρες πολλοὶ καὶ ῥυτὰ καὶ κλίνας καὶ θρόνοι κατάκοσμοι καὶ ἵππων χαλινὸι καὶ προστερνίδια καὶ ἐπωμίδια, πάντα ὁμοίως διάλιθα καὶ κατάχρυσα, which required 30 days to be delivered up, derived partly from the dominion of Darius Hystaspis, partly from that of the Ptolemies,—what had been deposited by Cleopatra with the Coans, and these had surrendered,—partly collected zealously by himself, ib. 115. The ἐκπώματα διάλιθα at the banquets of Mithridates are mentioned by Plut. Lucullus 37., and θυρεὸς τις διάλιθος from him, which adorned Lucullus' triumph, ib. 40. Eratosth. in Macrob. Sat. v, 21. mentions a κρατῆρα λιθοκ., χρυσοῦν λ. Menander ἐν Παιδίῳ, ἐκπωμα λ. Poll. x, 187., phials Athen. ii. p. 48 sq. and Agatharchus in Phot. p. 459. Bekk., περιανχένια λ. Heliod. vii, 27., neck-laces χλιδῶνας λ. Diod. xviii, 27., χρυσοῦν καὶ λ. κόσμον ἐν πλοκίοις καὶ περιδεραίοις Plut. Phoc. 19. and Eunap. Aedes. p. 30. Wytttenb. χιτῶνας (read χλιδῶνας) διαχρύσου λ. τῶν πολυτιμῆτων Callix. in Athen. v. p. 200 b, a mask διάχρυσον καὶ λ. Lucian Tim. 27, dagger belt and golden garlands Heliod. ix, 23. x, 32. Plin. xxxiii, 2 turba gemmarum potamus et smaragdis teximus calices. Juv. v, 43. Also an iron helmet-band, περιτραχήλιον λ. occurs Plut. Alex. 32.] Die Edelsteine der H. drei Könige herausg. Bonn 1781. [The best were taken away at the flight in the time of the French revolution.] — Gems in fibulis (Spart. Hadr. 10., in busts likewise we find the buckles hollowed out for them, PioCl. vi. p.



74.), on sword-hilts, belts, [shoes, like those significantly presented by Trajan to Adrian,] Cameos often on garlands and crowns of antique heads, PioCl. vi. p. 56. Comp. §. 131. R. 1. 207. R. 7.

5. §. 161, 3. *Gemma bibere*, Virg. G. ii, 506. Propert. iii. 5, 4. The ὄνυξ μέγας τραγελάφου πριαπίζοντος, Böckh C. I. 150. Staatsh. ii. s. 304., is perhaps to be understood according to §. 298. 309. R. 1. CELEBRATED VASES: The Mantuan in Brunswick, §. 264. R. 1. Farnesian goblet of sardonyx, [from the tomb of Adrian] with representations of Egyptian natural productions, Neapel's Antiken. s. 391. Millingen Un. Mon. ii, 17. [A. Gargiulo Intorno la tazza di pietra sard. orientale del M. Borb. Nap. 1835. 4to. B. Quaranta in the Mus. Borb. xii. tv. 47. Uhden in the Schr. der Berl. Akad. for 1835, s. 487—497. Zoëga in an unpublished explanation understood "la spedizione di Perseo" on account of the "closed knife and the sack" of the centre figure. The sack, and the plough above, are also explained by Quaranta who, amid a heap of the most untenable observations, with Millingen sees Alexander in this figure, but the knife, which in Uhden's drawing according to the microscope is curved downwards, he took for a dagger. Uhden's explanation of the incomparable, and extremely difficult work is a model. He recognises Egypt in the array of fertility after the overflow. Isis resting on the sphinx, holds aloft the ripened corn-ears, the Nile sits tranquilly on the accustomed bank, two of his daughters, the nymphs of the streams which form the Delta, have drawn the drinking water clarified there, the winds hover peacefully, the peasant lays aside the plough which has done its work, the bag of seed-corn is emptied, he has taken up the knife for pruning in the garden and vineyard.] Coupe des Ptolemées or Vase de Mithridate, in the Cabinet du Roi at Paris, adorned with very highly raised sculpture, representing side-boards and Bacchián masks. Montfaucon i, 167. (Köhler) Descr. d'un vase de sardonyx antique gravé en relief. St. Petersb. 1800. (marriage subjects). The Beuth onyx vase at Berlin, see Tölken, Staatzeit. 1832. N. 334. Hirt, Gesch. der bild. Künste s. 343. Sillig, Kunstblatt 1833. N. 3 f. Thiersch Münchner Abhdl. der philol. Kl. ii. s. 63. Birth of Commodus, of Augustus, Sillig, of L. Cæsar, Tölken. A balsamario of onyx in the Vienna cabinet, with Bacchian attributes on the foreside, is seen, from the inscription on the back, to have been a present to a hetaira: ζήσαις ἐν ἀγαθοῖς, φίλη γὰρ εἶ ξένοις, ἔασον δέ με διψῶντα πιεῖν. The verse from Anacreon Fr. 56. ed. Bergk.—[Arneth, Explanation of the 12 largest engraved stones of the Royal Cabinet of Coins, Weiner Jahrb. 1839. i Anz. s. 28. The gems with Germanicus and Agrippina, Gött. Anz. 1847. s. 456.] Large cameos §. 161, 4. 200, 2. 207, 7. The Vatican cameo in four layers is still larger than that of Paris; it represents Dionysus and Ariadne drawn by four centaurs. Buonarroti, Medagl. p. 427. comp. Hirt ibid., s. 342.—Statue of Nero in jasper, of Arsinoë in emerald, Plin.; figurettes in plasma di smeraldo are oftener to be met with.

The LITERATURE of glyptography is given by Millin, Introd. (very incomplete) and Murr, Biblioth. Dactyliograph. Dresd. 1804. 8vo. GENERAL collections of gems by Domen. de Rubéis (Æneas Vicus inc.), Pet. Stephanonius (1627), Agostini (1657. 69), de la Chausse (1700), [Rome 1805 in 2 vols. 8vo.] P. A. Maffei and Domen. de Rossi (1707—9. 4 vols.),

[Nov. Thesaur. vet. gemmarum 4 vols. fol.] Gravelle (1732. 37), Ogle (1741), Worlidge (1778), Monaldini and Cassini (1781-97. 4 vols. fo.), Spilsbury (1785), Raponi (1786) and others. PARTICULAR cabinets by Gorlæus (first 1601), Wilde (1703), Ebermayer (1720-22), Marlborough (1730), [Choix de pierres ant. gr. du Cab. du Duc de Marlborough fol. 2 vols., each of 50 pl., very rare,] Odescalchi §. 262. R. 4., Stosch §. 264. R. 1., Zanetti (ed. by A. Fr. Gori. 1750), Smith (Dactyliothea Smithiana with commentary by Gori. V. 1767. 2 vols. fo.). From the Cabinet du Roi, Caylus Recueil de 300 têtes and Mariette's Recueil 1750. comp. §. 262. R. 3. Those of Florence in Gori, Wicar, Zannoni, §. 261. R. 2. Those of Vienna, §. 264. R. 1. The Imperial Russian, §. 265. R. 2. Those of the Netherlands, §. 265. R. 1. [The Royal at Naples.] CATALOGUES of the Crozat collection (by Mariette 1741; it has gone to Russia with the Orleans collection), the de France §. 264, 1., the Praun at Nürnberg (by Murr, 1797), [now in the possession of Mad. Mertens-Schaafhausen at Bonn,] the collection of Prince Stanislas Poniatowsky, which is full of counterfeits. [Catal. des p. gr. ant. du prince Stan. Poniatowsky 4to. Fir. 1831.] L. Rossi Spiegaz. di una Racc. di gemme vol. i. Mil. 1795. 8vo. [Dubois Descr. des p. gr. ant. et mod. de feu M. Grivaud de la Vincelle P. 1820.] Creuzer zur Gemmenkunde; ant. geschn. St. vom Grabmal der h. Elizabeth 1834. cf. Feuerbach im Kunstbl. Visconti Esposiz. delle impr. di ant. gemme raccolte per uso del Princ. Chigi in his Op. Div. T. 2, his most important work on engraved stones. Schlichtegooll's Answahl 1798. 4to.] Vivenzio, Gemme antiche inedite. R. 1809. 4to. Millin, Pierres gravées inéd. (an opus postumum). P. 1817. 8vo. [Gemme incise dal Cav. Gius. Girometti publ. con le illustr. di P. E. Visconti R. 1836. fol. 10 pl. Ed. of only 100 copies.] IMPRESSIONS by Lippert in a peculiar mass (two collections, a Latin catalogue by Christ and Lippert for the first, a German one by Thierbach for the second); by Dehn in brimstone, descr. by Fr. M. Dolce (E. Qu. Visconti?) 1772; by Tassie, in something like enamel (Catalogue des empreintes de Tassie by Raspe, 1792); of the Berlin collection §. 264. R. 1.; Impronte gemmarie dell' Instituto, comp. Bull. 1830. p. 49. Cent. i. ii. Bull. 1831. p. 105. iii. iv. Bull. 1834. p. 113. [v. vi. 1839. p. 97.] Archäol. Intell. 1835. No. 64-66. [Th. Cades has collected 5,000 carefully selected impressions in Rome, among them 400 stones of Etrurian origin.] Much on particular gems in Montfaucon, Caylus, Visconti, Iconographie, &c.

Victorius, Dissert. glyptogr. R. 1739. 4to. Gori's Hist. glyptographica, [præstantiorum gemmariorum nomina compl. Ven. 1767 fol. together with an App. in the Memorie d. Accad. di Cortona ix. p. 146.] in the second vol. of the Dact. Smith. Caylus, Mém. de l'Ac. des Inscr. xix. p. 239. Christ, Super signis, in quibus manus agnosci antiquæ in signis possint, Commtr. Lips. litter i. p. 64 sq. The same author's treatise by Zeune, p. 263. and preface to the Dactyliotheke of the Richter cabinet. Klotz, Ueber den Nutzen und Gebrauch der alten geschnittenen Steine. Altenb. 1768. G. A. Aldini, Istituzioni glittografiche. Cesena 1785. [Millin Introd. à l'étude des p. gr. 1797. 8vo. Caylus, sur les p. gr. in the Mém. de l'Acad. xix. p. 239.] Gerhard zur Gemmenkunde, Kunstbl. 1827. N. 73-75. E. Braun über die neuesten Fortschritte der Gemmenkunde Archäol. Intell. Bl. 1833. St. 7. 8.

## E. WORKING IN GLASS.

316. Glass is the more fittingly mentioned in this place, <sup>1</sup> as it was used among the poorer classes as a substitute for the precious stone of the signet-ring, and, for that reason, the imitation of gems and cameos in glass-pastes was very widely diffused in antiquity, whereby many very interesting representations have been preserved to us in this class of monuments. According to Pliny, it was wrought in a threefold manner, <sup>2</sup> sometimes blown, sometimes turned, and sometimes engraved; of which processes the first and third are also found united. Although perfectly clear and white glass was far from being <sup>3</sup> unknown to the ancients, they everywhere manifested a preference for other colours (especially purple, dark blue and green), and for an iridescent splendour. They had also beau- <sup>4</sup> tiful cups and goblets of coloured glass, which were sometimes made of pieces of variegated glass, and sometimes ingeniously composed of glass and gold. The *murrhina*, which we must <sup>5</sup> mention by the way, can only be considered as articles of luxury, not as works of art.

1. Σφραγιῶδες ὑάλιναί at Athens, about Ol. 95. C. I. n. 150. Vitreae gemmae ex vulgi annulis, Plin. comp. Salmas. Exerc. Plin. p. 769. As counterfeits in Trebell. Gallien. 12. and often in Pliny. Comp. §. 313. R. 3. The largest glass-paste is the cameo 16 × 10 inches in the Vatican (Winck. W. iii. s. 44 ff.), Dionysus lying in Ariadne's lap. Buonarroti, Medagl. p. 437.

2. Plin. xxxvi, 66. Toreumata vitri, Mart. xii, 74. xiv, 94. Ὑαλοψῶς or ὑαλέψης, vitri coctor, see Stephani Lex. ed. Brit.; opifex artis vitriæ, Donati Inscr. ii, 335, 2. [ὕελινοποιός, Spartan inscr. Bullett. d. Inst. 1844. p. 149. s. ὑαλοτέχνης, ὑαλουργός. Achilles Tat. ii, 3. κρατῆρα—ὑάλου μὲν τὸ πᾶν ἔργον ὀρωρυγμένης, κύκλω δὲ αὐτὸν ἄμπελοι περιέστερον, Appulei Metamorph. ii. vitrum fabre sigillatum.] The Barberini, now the Portland vase, exhibited in the British museum, [wantonly broken in pieces in 1845 and successfully restored,] from the so-called tomb of Alexander Severus, consists of blue, transparent glass, and over it a white opaque glass-fusion, the latter sculptured. Gr. Veltheim Aufsätze i. s. 175. Wedgwood, Descr. du Vase de Barberini. L. 1790. Archæol. Brit. viii. p. 307. 316. Millingen Un. Mon. i. p. 27. [St. Piale Dissert. T. i. The fact that the nymph does not seem to ward off the god, but to draw him towards her, is opposed to Millingen's explanation. The fine amphora from Pompeii, of a similar style of art, M. d. I. iii, 5. Annali xi. p. 84., and a patera, M. Borbon. xi. tv. 28. 29.]

3. Same glass articles in Stackelb. Gräber Tf. 55. Beautiful pure plates of glass found in Velleia and Pompeii, called also *specularia* according to Hirt, Gesch. iii. s. 74. On variegated windows §. 281. R. 5. Walls were faced with *vitricæ quadraturæ*, Vopiscus Firm. 3. There were parti-coloured glass seals in Athens. Colour-changing glass, ἀλλάσσον, see Ha-

drian in Vopisc. Saturn. 8. The Alexandrine glass-wares, §. 230, 4., were very celebrated in the time of the emperors, comp. §. 240, 6. On the ancient art of colouring glass, Beckman, Beytrage zur Gesch. der Erfind. i. s. 373 sqq. Works in glass, Becker Gallus i. s. 145.

4. Lesbian cups of purple glass, Athen. xi, 486. Lesbium vas cælatum, Fest. Ἰάλινα διάχρυσσα v. 199. Vasa vitrea diatreta Salmas. ad Vopisc. l. l.; such were wrought by the diatretarii. Fine goblet from the Novarese, of moveable colours, encompassed with a sky-blue net, with an inscr. in green glass. Winck. W. iii. s. 293. [in possession of the Marquis Trivulzi at Milan; perfect in its technical execution.] A similar drinking glass of the Emperor Maximian, white in a purple net, found at Strasburg. Kunstbl. 1826. s. 358. [Two others at Cologne, Jahrb. des Alterth. Vereins at Bonn Tf. 11. 12. s. 377. by Urlichs. On a vase from Populonia on which a villa maritima is represented, a memoir by Dom. Sestini. On a glass vase from Genoa, a memoir by Bossi. Fragments in the catacombs, Bosio i. p. 509. Buonarroti Osservazioni sopra alc. frammenti di vasi ant. di vetro ornati di figure, trov. ne' cimiteri di Roma, F. 1716.—Ach. Tat. ii, 3. describes a crater of rock-crystal with grapes which appear to ripen through the pouring in of the wine.]

5. On the *murrhina vasa* (from the East, known to the Greeks, but little however, from the time of Nearchus, at Rome from the time of Pompey, not gems according to the legal acceptation, Dig. xxxiv, 2, 19): [N. Guisbert De murrhinis, Francof. 1597. 8vo.]: Christ, De murrinis vet. Lips. 1743. 4to. V. Veltheim on the *vasa murrh.* (Aufs. i. s. 191). Le Blond and Larcher, Mém. de l'Ac. des Inscr. xliii, 217 sq. 228 sq. Mongez, Mém. de l'Inst. Nat. ii. Litt. p. 133. Schneider Lex. s. v. μύρρινα. Roloff and Buttmann Mus. der Alterth. W. ii. s. 509. (Porcelain; Schneider opposed, Programm von Mich. [Brieg] 1830.) Mag. encycl. 1808 Juill. Ruperti's collection to Juv. vi, 156. &c. Rozière, Mémoires de la Descr. de l'Égypte i. p. 115. Minutoli, Gott. G. A. 1818. s. 969. Abel-Rémusat, Hist. de la ville de Khotan. 1820. Gurlitt, Archäol. Schriften, s. 83. Corsi, Delle pietre antiche, p. 165. (murrha = spato fluore). Becker's Gallus i. s. 143. Porcelain according to Cardanus first De subtil. 1550. Chinese steatite according to Veltheim, the stone Ju according to Hager Descr. des méd. Chin. du Cab. Imp. P. 1805, Abel-Rémusat opposed, ibid. Fluor spar according to Minutoli on the murrhina of the ancients B. 1835, Thiersch Münchner Abhdl. der philos. philolog. Klasse i. s. 443 and Classic. Journ. 1810. p. 472. [Creuzer was led to the same explanation by Doppelmayer before 1830, Heidelb. Jahrb. 1830. s. 369, so also Hüllmann Handelsgesch. der Gr. s. 209. Fluor spar from India.] In Thiersch Tf. A. B. (§. 505) fine fragments of murrina cocta, among which he even classes the Barberini vase?

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F. ART OF DIE-CUTTING.

I 317. Numismatics, or the science which treats of the money in use among the ancients, is, in the main, an auxiliary to the knowledge of the trade and mutual intercourse of the ancients; but also, at the same time, for the history of art, through the

artistic value of the types (§. 98. 132. 162. 176. 182. 196. 201. 204. 207.). The art of cutting dies, notwithstanding the 2 small fame which these artists enjoyed even in the chief places where the art was cultivated, was carried by the Greeks to the highest perfection, so that nothing remained to the Romans but to regulate better the process of stamping. Although the casting of coins was not confined to ancient 3 Italy (§. 176. and 306. R. 5.), stamping however was the usual practice in Greece and later Rome, and yet the blanks, that is the pieces of metal destined for impression, were cast in moulds, commonly of a lenticular form, that they might be the better able to bear the stamp, which was often very deeply engraved. The dies were made of hardened brass down to the time of Constantine, then of steel. Medals properly so- 4 called, which were not to circulate as money, have not remained from the Greek period of art; on the other hand the large gold pieces of the Constantinian period must be regarded as such.

1. Eckhel, D. N. Prolegg. i. Hirt, Amalth. ii. s. 18. Stieglitz Einr. ant. Münzsamml. s. 13. 23. Archäol. Unterhalt. ii. s. 47. Mongez, Mém. de l'Inst. Roy. T. ix. The die-cutters for the imperial coins were afterwards called *scalptores sacræ monetæ*, Marini, Inscr. Alb. p. 109.

2. Except in monograms there are no engravers who give their names, except those of Sicilian coins, as Cimon and Eucleidas on coins of Syracuse, and Euænetus of Syracuse and Catana; also Cleudorus on coins of Velia, and Neuantus of Cydonia. See R. Rochette, Lettre à M. le Duc de Luynes. 1831. [Supplément au Catal. des artistes p. 83 sqq. cf. 475, there are 28 names quoted, among them particularly the fine Apollo on coins of the Clazomenians with ΘΕΟΔΟΤΟΣ ΕΠΟΙΕΙ, of which, besides those that are well known, there are two in the Garriri collection at Smyrna, see N. Rhein. Mus. vi. St. 3. s. 383.] and Streber, Kunstblatt 1832. N. 41. 42. Even the ancients thought it remarkable that the coins of Athens should be so destitute of art, whilst the Macedonian coins of Alexander were so elegant, Diog. vii, 1, 19.

3. Tresviri A. A. A. flando feriundo. The chief apparatus of stamping is seen on a denarius of Carisius, viz. anvil, hammer and tongs. The *matrix* was originally on the hammer and anvil (quadr. incusum). Λίγδοι (§. 306, 5) of clay and stone are still found.

4. These gold pieces are often understood as medals, and busts of generals on monuments adorned with them. See Steinbüchel, Notice sur les Médailles Rom. en or du M. Imp. et Roy., trouvées en Hongrie dans les ann. 1797 et 1805. 1826.

## B. DRAWING ON A PLANE SURFACE.

## 1. BY LAYING ON COLOURING STUFFS OF A SOFT AND FLUID NATURE

## A. MONOCHROME DRAWING AND PAINTING.

318. The ancients paid very great attention to delicate and finely undulating outline drawing, and in their schools (§. 139, 3) long preparatory exercises with the style (*graphis*) on tablets covered with wax, and with the brush (*penicillus*) and one colour on boxwood tablets, sometimes with a black colour on white, sometimes with white on black-coloured tablets, were held necessary before the scholar should venture to dip the brush in several colours.

See Böttiger, *Archæol. der Mahlerei*, s. 145 ff. Mere outlines were *μονόγραμμα* (Parrhasius produced such); figures of one colour on a ground of several colours *μονοχρώματα*. *Λευκογραφεῖν εἰκόνα*, Arist. Poet. 6. denotes monochromata ex albo, like those of Zeuxis, Plin. (comp. Apellis monochromon? Petron. 84. [rather monocnemon §. 141. R. 3.; Zeuxis goes immediately before in Petronius, but monochromes by Apelles are not otherwise known. Fronto ad Verum i.: quid si quis Parrhasium versicolora pingere juberet, aut Apellem unicolora?]; a sort of *camayeu*, comp. Böttiger, s. 170. Lucil. in Nonius, p. 37. calls figures merely shaded *monogrammi*, comp. Philostr. *Apoll.* ii, 22. Above §. 210, 6.

## B. PAINTING IN WATER-COLOURS.

- 1 319. From the superior importance attached to design, great soberness in the use of colours prevailed for a long time in antiquity, and in so much the higher degree, as the design
- 2 was sharper and more accurate. Even the Ionic school, which loved florid colouring (§. 137. 141, 1.), adhered to the so-called *four* colours even down to the time of Apelles; that is, four principal colouring materials, which, however, had not only natural varieties themselves, but also produced such by mixing; for the pure application of a few colours only belonged to the imperfect painting of the architectural works of Egypt (§. 231.), the Etruscan hypogea (§. 174, 4.) and the Grecian earthen-
- 3 ware. Along with these leading colours, which appeared stern and harsh (*colores austeri*) to a later age, brighter and dearer colouring materials (*col. floridi*) were gradually introduced.
- 4 These were dissolved in water, with an addition of glue or gum (neither the application of the white of eggs nor of oil is discoverable in ancient pictures), in order to lay them on
- 5 from the palette with the brush. Painting on panels (for which larch-wood was preferred) was according to Pliny held in high esteem, at the most flourishing period of art; however,

the primitive practice of painting temples with ornaments (§. 274. R. 2.) naturally led to mural painting properly so-called, which was also employed in Grecian temples and tombs, in like manner as in Italy, but was chiefly applied, from the time of Agatharchus (§. 135.), to the decoration of rooms, until it seems in the Roman period to have absorbed all art (§. 209.). The surface was prepared for it in the most careful manner, 6 and the advantages of painting on the fresh plaster (*al fresco*) were very well known; canvass paintings also occur in the Roman period. Not only did the ancients anxiously strive 7 to discover and observe the harmonic proportions of colours (*harmoge*), but they also had a fine eye for the quantity of light which the picture should on the whole maintain, for unity in the general effect of light; this was the *τόνος* or *splendor*, which Apelles promoted by a thinly dissolved black (*tenue atramentum*), therefore an azure colour, which at the same time protected the picture and mellowed the sharpness of the colours. On the whole, the climate and views of life were 8 equally influential in causing the ancients to prefer sprightly colouring, with decided tones which resolved themselves into a pleasing fundamental tone.

1. This regular proportion is distinctly stated by Dionysius De Isæo 4; the *earlier* pictures were *χρώμασι μὲν εἰργασμένοι ἀπλῶς καὶ οὐδεμίαν ἐν τοῖς μίγμασιν ἔχουσαι ποικιλίαν, ἀκριβεῖς δὲ ταῖς γραμμαῖς* and so forth; the *later* were *εὐγρᾶμμοι μὲν ἦττον*, or had variety in light and shade, and *ἐν τῷ πλήθει τῶν μιγμάτων τὴν ἰσχύν*. We must not however stretch the former too far; in the time of Empedocles, and therefore of Polygnotus, the blending of colours was already greatly perfected. See Simplicius ad Aristot. Phys. i. f. 34. a.

2. The *four colours* (according to Pliny xxxv, 32. Plut. de def. orac. 47. comp. Cic. Brut. 18, 70.); 1. *White*, the earth of Melos, *Μηλιάς*. More rarely white lead, *cerussa*. In mural paintings especially the Parætonium. 2. *Red*, the *rubrica* from Cappadocia, called *Σινωπίς*. *Μίλτος*, *minium*, has various significations. *Μίλτος*, of burnt *ὄχρα*, was accidentally discovered by Cydias, Ol. 104., according to Theophr. *de lap.* 53; according to Pliny, who calls it *usta*, it was first used by Nicias about Ol. 115. 3. *Yellow*, *sil*, *ὄχρα*, from Attic silver mines (Böckh, *Schriften der Berl. Akad.* 1815. s. 99.), in later times used chiefly for lights, besides, the reddish yellow *auri-pigmentum*, *σανδαράκη*, arsenical ore. 4. *Black* (together with blue), *atramenta*, *μέλαν*, of burnt plants, for example the *τρύγινον*, of the skins of pressed grapes. *Elephantinon*, of burnt ivory, was used by Apelles.

3. *Col. floridi* (furnished by those who ordered pictures, and often stolen by the painters, Plin. xxxv, 12.) were: *chrysocolla*, green from copper-mines: *purpurissum*, a chalk mixed with the juice of the purple-fish; *Indicum*, indigo, known at Rome from the time of the emperors (Beckmann, *Beyträge zur Gesch. der Erfind.* iv. St. 4.). *Cæruleum*, blue smalt, of sand, saltpetre and copper (?), was invented in Alexandria. *Cin-*

*nabari* (in Sanscrit, *chînavarî*) denotes actual cinnabar, sometimes natural, sometimes artificial (Böckh. *ibid.* s. 97.), but also another Indian drug, probably from Dragon's blood. The artificial was first prepared by the Athenian Callias about Ol. 93, 4.—On colouring materials: Hirt (§. 74.) *Mém.* iv. 1801. p. 171. Landerer on the Colours of the Ancients in Buchner's *Repertorium f. Pharmacie* Bd. 16. 1839. S. 204. *γραφὶς ἰχθυόκολλα* in gilding S. 210. Göthe, *Farbenlehre*, ii. s. 54. on the ancient names of colours; s. 69 ff. hypothetical history of colouring by H. M. Davy (chemical researches) *Transact. of the Royal Society*. 1815., extracted in Gilbert's *Annalen der Physik*. 1816. St. i. 1. Stieglitz *Arch. Unterhaltungen*. St. 1. Minutoli in Erdmann's *Journ. für Chemie* viii, 2. *Abhandlungen*, zw. *Cykl.* i. s. 49. J. F. John *Die Malerei der Alten*, B. 1836. 8vo. see Knierim *Die Harzmalerie der Alten* Lpz. 1839. [Idem *Die endlich entdeckte wahre Malertechnik des Alterth. u. des Mittelalters* 1845. Roux *Die Farben, ein Versuch über Technik alter u. neuer Malerei*, Heidelb. 1824.]

4. A female painter with palette and brush, copying a Dionysus-Herma, M. Borb. vii, 3. comp. the figure of the painting in Pompeii, on which see Welcker *Hyp. Röm. Studien*, s. 307. [A painter working at the portrait of a person sitting to him, playfully treated. *Archäol. Zeit.* iv. S. 312, copied as a vignette in Mazois *R. de P.* ii. p. 63.] The easel *ἀκρίβας, κιλλίβας*.

5. On tabular paintings, likewise on whole series of tablets (his *interiores templi parietes vestiebantur*, Cic. *Verr.* iv, 55. *tabulæ pictæ pro tectorio includuntur*, Digest. xix, 1, 17, 3. comp. Plin. xxxv, 9. 10. Jacobs ad Philostr. p. 198.), Böttiger, s. 280, and on the prevalence of these R. Rochette *Journ. des Savans* 1833. p. 363 sqq. G. Hermann *De pictura parietum*, *Opusc.* v. p. 207. Letronne *Lettres d'un Antiquaire sur l'emploi de la peinture hist. murale* P. 1836. 8vo. *Appendice aux Lettres d'un Antiq.* 1836. R. Rochette *Peint. Ant. précédées de rech. sur l'emploi de la peint. dans la décoration des édif.* P. 1836. 4to. Welcker in the *Hall. L. Z.* 1837. N. 173 ff. R. Rochette, *Lett. Archéol.* i. P. 1840. 8vo.] However, there is no doubt about the stucco in the interior of the Theseion (Semper *ueber Vielfarb.* *Arch.* s. 47.); the battle pieces of Micon must have been painted on it. In like manner doubtless Panæus painted on the *tectorium* laid on by him in the temple of Pallas at Elis. Pliny xxxvi, 55. comp. xxxv, 49. Of this kind are temples which *ὑπὸ τῶν ἀγαθῶν γραφῶν καταπεποίκιλται*, Plat. *Euthyphr.* p. 6. comp. Luc. *de conser. hist.* 29. [R. Rochette *Peint. inéd.* p. 198, remarks that the testimony of Lucian does not apply here.] Solon already forbade sepulchres (Cic. *de legg.* ii, 26.) *opere tectorio exornari*, that is evidently to be decorated with paintings. A tomb painted by Nicias, Paus. viii, 22, 4. comp. 25, 7. ii, 7, 4. Mural paintings by Polygnotus and Pausias at Thespiæ, Plin. xxxv, 40. On the wall-paintings in Italy §. 177, 3; these were used by the Greeks Damophilus and Gorgasus in the temple of Ceres, as well as by Fabius in the temple of Salus (above §. 182. R. 2. comp. Niebuhr *Rom. Hist.* iii. p. 356).

6. In Herculaneum the ground is generally *al fresco*, the rest *a tempera*. On that manner of painting (*ἐφ' ὑγροῖς*) Plut. *Amator.* 16. Letronne *Peint. Mur.* p. 373. Vitruv. vii, 3. Plin. xxxv, 31. *Pictura in textili*, Cic. *Verr.* iv, 1. comp. §. 209, 5. Technical processes of wall-painting in Pom-



peii, G. Bevilacqua Aldobrandini, *Progresso delle Scienze* vii. p. 279 sqq. (not encaustic, water colours on smoothed plaster, no animal and vegetable colours, merely in gouache.) R. Wiegmann, *Die Malerei der Alten in ihrer Anwendung u. Technik*. Hannover 1836. 8vo. cf. Klenze *Aphorist. Bemerk.* 1838. S. 586 ff. (Only the first kind of fresco painting, applying the colours to the fresh plaster, was practised in antiquity, never the second, wetting with lime-water, or the third, a gradual laying on of the uppermost lime-ground).

7. Plin. xxxv, 11. 36, 18. On the azure colour (from asphalt?) Göthe's *Farbenl.* ii. s. 87. In the painting of light we can neither deny to the ancients powerful fire-scenes (as the burning of the Scamander, Philostr. i, 1.) [the lightning birth of Semele i, 14.], nor milder effects (thus for instance the Pompeian picture, in R. Rochette *M. I.* i, 9., presents an agreeable twilight in the background). However, such are rare in ancient pictures.

If very carefully analyzed, the so-called Aldobrandini marriage (§. 140, R. 3.), dug up in the Esquiline in 1606, is painted in a slight and thin manner, but with a very fine feeling of harmony and the significance of colours, now in the Vatican Museum.—*Die Aldobrandinische Hochzeit*, by Böttiger (in an antiquarian point of view) and H. Meyer (artistically). Dresden 1810. L. Biondi, *Diss. dell' Acc. Rom.* i. p. 133. G. A. Guattani, *I piu celebri quadri riuniti nell' apartem. Borgia del Vaticano*. R. 1220 f. [tv. 1. with some differences by Meyer.] Gerhard, *Beschr. Roms* ii, ii. s. 11. For the literature of ancient painting: Dati, *Della pittura ant.* F. 1667. 4to. Jo. Scheffer, *Graphice*. Norimb. 1669. H. Junius, *De pictura veterum*. Rotorod. 1694. fo. and the works mentioned §. 74. R. Dürand, *Turnbull*, [A treatise of anc. painting L. 1740. fol. important on account of the 18 paintings, now mostly unknown, of which it contains engravings,] Requeno, *Riem.* [G. Schöler *Die Malerei b. den Griechen*, Lissa 1842. 4to. Idem über *Farbenanstrich und Farbigkeit plastischer Bildw.* Danzig 1826. 4to. full of insight. Fr. Portal *Des couleurs symboliques dans l'antiqu., le moyen age et les temps mod.* P. 1837. The Iliad painted red, the Odyssey sea-green, Eustath. ad *Il.* v, 9.]

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C. ENCAUSTIC PAINTING.

320. Encaustic painting was a very extensive branch of 1 ancient art (§. 139. 140.), and was employed especially in animal and flower pieces [?], where illusion was more the principal aim than in paintings of gods and heroes. Three kinds 2 were exercised: 1. The mere burning in of outlines on ivory tables with the style. 2. The applying of coloured wax, 3 all kinds of which were kept arranged in boxes, commonly on wooden tablets (but also in burnt clay), with the aid of hot pencils, which was followed by complete blending and softening down (*ceris pingere et picturam inurere*). 3. The 4 painting of ships with brushes which were dipped in a kind of fluid wax mixed with pitch, which not merely provided their external surface with an ornament, but, at the same time,

5 with a protection against the sea-water. We must rest satisfied with these slender data, gathered from passages in the ancients, as the attempts to revive the lost art of encaustic painting have not hitherto yielded any satisfactory result. [A very important application of painting, from an early period, was that for which in our times the term lithochromy has been formed, and which served to ornament the various architectural members, employing different, but always unmixed colours, which were either applied to the marble or the plastered limestone, poros or λίθος πώρινος; στηλογραφία was a particular branch of it (a term, like τοιχογραφία, which does not refer to *writing*;) the ἀλαβαστρογραφεῖς were also of a similar class.]

2. Encausta pingendi duo fuisse genera antiquitus constat, cera, et in ebore (therefore without cera) [?] cestro, i. e. veruculo, donec classes pingi cœpere. Plin. xxxv, 41. Letronne Journ. des Sav. 1835. p. 540. connects cera, et in ebore cestro (vericulo), not correctly: if cera is not cestro, the opposition to what follows falls to the ground.

3. Tablets, those of Pausias for instance, were painted in the encaustic manner, also doors (C. I. 2297, walls and ceilings, on the contrary, in another way), triglyphs, that is those of wood (*cera cœrulea*, Vitruv. iv, 2.), lacunaria, in earlier times perhaps with simple ornaments (as in the Athenian temples), since the time of Pausias with figures, Plin. xxxv, 40. (such pictures *κουράς, ἐγκουράς*, Hesych., comp. Salmas. ad Vopisc. Aur. 46.). Figlinum opus encausto pictum, Plin. xxxvi, 64. On the loculatae arculæ ubi discolores sunt ceræ, Varro de R. R. iii, 17., the *ράβδιον διάπυρον* Plut. de num. vind. 22., *καυτήριον* Digest. xxxiii, 7, 17. Tertull. adv. Herm. 1. *Χραίνειν* is, according to Timæus, Lex. Plat. laying on, *ἀποχραίνειν*, the softening down of colours; however in Plato, Resp. ix. p. 586., *ἀποχραίνειν* rather signifies the reflection of colour on bodies. *Ἐγκαύματα ἀνεκπλύτου γραφῆς*, Plat. Tim. p. 26. *Κηρόχυτος γραφή* as late as the Byzantine empire, Du Cange, Lex. Græc. p. 647 sq., comp. Euseb. V. Const. iii, 3. G. Hermann supposes with Letronne that encaustic painting was, according to Pliny, without brush. *γράφειν διὰ πυρός, colores urere*. According to Letronne Lettres d'un Antiq. p. 385. *ράβδιον*, brush, *διάπυρον*, on account of hell, where it figures in Plutarch; evidently false. [Comp. also Appendice aux Lettres d'un ant. p. 104 sqq. Schneider's explanation, on the other hand, is defended also by C. Jahn Acta Societ. Græc. i. p. 341.] Idem in opposition to Welcker's Encaustik in Gerhard's Hyperbor. Studien. S. 307. Encaustic with the brush according to Klenze Aphorist. Bem. S. 606; obviously false, contrary to the story of Pausias at Thespiæ. [The last of these manuscript additions would scarcely have been allowed to remain, if the author had more closely examined the matter. What Klenze asserts cannot be otherwise conceived, and the story of Pausias can be so explained as to agree therewith. The higher art of encaustic which was exercised by Polygnotus, Nicanor and Archelaus, along with their chief branch of art, and exclusively by a number of famous artists whom Pliny separates from the great temple painters, in order to give afterwards a mixed list of the in-

ferior artists in both departments, was, as is certainly shown in the Hall. A. L. Z. 1836. Oct. S. 149—160, (if the agreement of all text-passages after unbiassed explanation proves anything), brush-painting with wet, cold colours kept in numerous small compartments of a large box, in the laying on of which wax was used, in what oily dissolving combination is unknown, on which followed the burning in, and at the same the blending of the colours, the *χραινειν και αποχραινειν*, the deepening and softening of the tone, the regulating of the bright and dark tones, by means of a small rod, hot at the lower end, and held over and passed along the surface (*ράβδιον διάπυρον, καυτήριον*). Tim. Lex. v. *χραινειν* — τὸ χρώζειν διὰ τοῦ ράβδιου. A glowing rod could not surely be used for laying on colours, and the cestrum which Hirt mixed up, referred merely to the ivory. Thus by the encaustic process, following on the painting itself (like the enchasing of the toreutes on the embossing or casting of figures), blending of colours, transparency, and depth of shadow were promoted, and effect and illusion attained. The same process was rudely exemplified, when wax candles were employed for retouching and equalizing the melted wax which was laid on with thick brushes on walls and naked marble statues, Plin. xxxiii, 40.]

4. Painting of ships §. 73. *Inceramentum navium*, Liv. xxviii, 45. *Κηρός* among the materials for ship-building, Xenoph. RP. Athen. 2, 11. On pitch. Plin. xvi, 23. *Κηρογραφία* on Ptolemy the Fourth's ship, Athen. v. p. 204. [Æschylus in the Myrmidons probably referring to the hippalektryon on Hector's ship *κηρο[χρισ]θέντων φαρμάκων πολὺς πόνος*, like *κηροχυτέω*. In like manner, Hipponax of the ship-painter Mimnes: *ἔπειτα μάλθῃ τὴν τρόπιν παραχρίσας*.]—Painting on a gold ground derived from antiquity. Letronne p. 556. *Navis extrinsecus eleganter depicta*, Appulei. Flor. p. 149. On the fleets Pliny xxxvi, 31. The same *ceræ*, but the mode different.

5. Caylus, *Mém. de l'Ac. des. Inscr.* xxviii. p. 179. Walter, *Die wiederhergestellte Mahlerkunst der Alten. Die Farben, ein Versuch ueber Technik alter und neuer Malerei*, von Roux. Heidelb. 1824. 8vo., comp. *Kunstblatt*. 1831. N. 69 sq. Montabert, *Traité complet de la peinture*. P. 1829. T. viii.

[6. Some remarks on the kind of colours, and the mode of laying them on in Völkel *Archäol. Nachl.* s. 81 f. Hall. L. Z. s. 150. Klenze *Aphorist. Bemerk.* s. 556. 560. 587. In the inscription found in 1836 referring to the works in the temple of Pallas Polias at Athens: *ἐνκαυτῆ τὸ κυμάτιον ἐνκήαντι τὸ ἐπὶ τῷ ἐπιστυλίῳ τῷ ἐντὸς κ. τ. λ.* In this way also were figures painted on the metopes and frieze, and such, not of marble, on the frieze of the Erechtheum, seem to be referred to in the same inscription: *ὁ Ἐλευσινιακὸς λίθος πρὸς ᾧ τὰ ζῶα* (although *ζῶον* by no means signifies usually or by preference, a painting), comp. Wiegmann *Die Malerei der Alten* s. 134 ff. Letronne in the *Journ. des Sav.* 1837. p. 369. Painted steles in Stackelberg *Gräber* Tf. 5. 6., three from the Peiræus engraved in the *Kunstbl.* 1838. N. 59. There is a stele on a vase from Volci, on which the painter represents yellowish palmettes on a white ground, Gerhard *Festgedanken an Winckelmann* B. 1841. Tf. ii, 1, and *Mus. Gregor.* ii, 16, 1.]

## D. VASE-PAINTING.

1 321. The peculiar technical processes of vase-painting,  
 which stood in so close a connexion with Greek manners and  
 customs that it could not pass over to the Roman world, did  
 not however among the Greeks themselves rank as a separate  
 branch of art, as there is nowhere mention made of vase-paint-  
 2 ers with the specific notice of any individual; but this only  
 exhibits the more clearly the artistic genius of the Grecian na-  
 tion, which unfolded its splendour even in articles of so little  
 3 value. In painting vases the process, when performed in a  
 careful manner, was as follows: the vases, after being once  
 slightly burnt, received, with rapid strokes from the brush, a  
 coating of the dark-brown colour commonly employed, and  
 4 were then exposed again to a gentle heat. This dark-brown,  
 faintly reflecting principal colour, appears to have been prepared  
 from oxide of iron; a thinner solution of the same material  
 yielded, as it appears, the faintly shining reddish yellow varnish  
 which alone covers the colour of the clay; in the places not at  
 all, or sparingly, painted; variegated colours, in chequered  
 drapery, flower-arabesques and the like, were not laid on till  
 5 after the burning was completed, as opaque colours. This  
 seemed to the Greeks the most suitable technics for vase-paint-  
 ing; the ruder process in the so-called Egyptian vases was  
 only kept up as an antiquity; and the placing of black figures  
 on a white ground (as on some vases found here and there in  
 Greece, and also at Volci) appears to have been the fashion  
 only for a short time. There are also vases occasionally found,  
 especially in Africa, which are painted exactly in the manner  
 of the walls, with bright colours on a white ground, and others  
 which exhibit on the same ground mere outlines.

1. See above in reference to this §. 75. 99. 143. 163. 177. 257. That  
 vases for use were also painted, is seen from vase-paintings themselves,  
 in which painted bowls and pitchers are borne (comp. Alcæus, fragm.  
 31. *κυλίχλαι ποικίλαι*, Demosth. de f. leg. p. 464. Bekk. *οί τὰς ἀλαβασ-  
 τροθήκας γράφοντες*); their use however seems to have been gradually  
 confined to prizes, gifts, chamber ornaments and tombs (§. 301). The  
 cycle of subjects therefore was restricted more and more even in Lower  
 Italy to the Bacchian. See Lanzi, De' vasi ant. dipinti diss. 3., the second  
 on the bacchanals, Opuscoli raccolti da Accad. Italiani i. F. 1806.—  
 A catalogue of painters' name from the vases (especially those of Volci)  
 is given by R. Rochette, Lettre à Mr. Schorn, Bulletin des sc. hist. 1831.  
 Juin. [2d ed. 1845. p. 1—83, enlarged by Welcker, N. Rhein. Mus. vi. St.  
 2.] Comp. Comment. Soc. Gott. rec. vii. p. 92. 117.

2. That the vases were not soft when they were painted, is proved  
 especially by the appearance of the scratched lines which frequently

occur, and by which the painter guided his hand when he proceeded carefully to work (see de Rossi in Millingen's *V. de Cogh.* p. 1x.), as well as by the substance of the paint being raised above the surface of the vase. There are many grounds for opposing the notion that patterns were used in the drawing of the outlines.

3. See Luynes, *Ann. d. Inst.* iv. p. 142 sqq. *Comp. Hausmann de confectione vasorum*, *Comment. Soc. Gott. rec. V. cl. Phys.* p. 113 (where naphtha and asphalt are assumed as colouring materials; however the present author is now decided also for the use of iron). Jorio, *Sul metodo degli ant. nel depingere i vasi.* [Nap. 1813.] Brocchi, *Sulle vernici*, *Bibl. Ital.* vi. p. 433. [*Haus Dei Vasi Greci*, Palermo 1823, de Rossi in Millingen *Vases de Coghill.* p. i—xx. *Kramer über den Styl u. die Herkunft der Griech. bemalten Thongefässe.* B. 1837. *F. Thiersch über die Hellenischen bemalten Vasen*, *Münchener Denkschr.* iv, 1. of the 1st class. Lenormant *Introduction à l'étude des vases peints.* I Partie P. 1845. 4to., from the *Elite des mon. céramogr.* thrown off separately. A vase manufacturer in the work, *Cylix from Tarquinii*, *Gerhard Festgedanken an Winck.* B. 1841. Tf. ii, 3. *Archäol. Zeit.* 1848. s. 108. N. 5.]

5. On very beautiful vases with variegated figures, *Bull. d. Inst.* 1829. p. 127. *Variegated vases from Centorbi* *Bull. d. I.* 1833. p. 5. [*R. Rochette Peint. Ant.* pl. 8—10.] *Specimens of vases with linear designs in Maisonneuve*, *Introd.* pl. 18. 19. *Cab. Pourtalès* pl. 25. *Vase paintings with different parts in relief*, *Cab. Pourtalès* pl. 33. (from Athens), *Mus. Blacas* pl. 3., [not rare also in Naples and Sicily]. *Athen.* v, 200 b. speaks likewise of vases at Alexandria painted with variegated *wax-colours*. *Minutoli* gives an account of painted vases from a catacomb at Alexandria, *Abhandl. zw. Cykl.* i. s. 184. *Works on vases: Picturæ Etr. in vasculis nunc primum in unum coll. illustr. a J. B. Passerio.* 1767. 1770. 3 vols. fo. *Antiquités Etrusques, Grecques et Rom., tirées du cabinet de M. Hamilton à N.* 1766. 67. 4 vols. fo. Text by Hancarville, also in English. *Coll. of Engravings from anc. vases mostly of pure Greek workmanship discovered in sepulchres in the kingdom of the two Sicilies—now in the possession of Sir W. Hamilton*, published by W. Tischbein, from 1791 downwards, 4 vols. fo. Text by Italinsky, also in French. [99 plates for a 5th vol. were taken in 1843 to London by H. Stuart, together with a number of plates already engraved for the *Tischbein Odyssey*.] Many single plates or smaller collections by Tischbein (*Reiner's Vases*). *Peintures de vases antiques vulg. app. Etrusques tirées de diff. collections et grav. par A. Clener, acc. d'expl. par A. L. Millin, publ. par Dubois Maisonneuve.* P. 1808. 2 vols. fo. *Descr. des Tombeaux de Canosa* par Millin. P. 1816. fo. *Millingen, Peintures ant. et inéd. de vases Grecs tirées de diverses collections.* R. 1813. The same, *Peint. ant. de v. Gr. de la coll. de Sir J. Coghill.* R. 1817. *Al. de Laborde* §. 264. R. 1. *Coll. of fine Gr. vases of James Edwards.* 1815. 8vo. [*Moses*,] *Vases from the collection of Sir H. Englefield.* L. 1819. 4to. *Inghirami, Mon. Etr.* (§. 178.) Ser. V. *Vasi fittili.* [4 vols. 1837. 400 articles.] G. H. Rossi, *Vasi Greci nella copiosa raccolta di—Duca di Blacas d'Aulps, descr. e brevemente illustr.* R. 1823. *Panofka* §. 262. R. 3. A work promised by Stackelberg on Attic vases [merged into the *Gräber der Hellenen*]. *Works on particular vases* published by Remondini, Arditì, Visconti, &c. [*Vases Etrusques du prince de Canino* R. 1830. f. m. 5 pl. *Mus. Greg.* ii.]

tv. 1—100. Raf. Politi Esposiz. di sette vasi Sicoli-Agrigent. Palermo 1832. 8vo., Cinque vasi di premio—nel Mus. di Palermo 1841. 4to. and a series of vases published separately at Girgenti and Palermo, N. Maggiore Mon. Sicil. ined. fasc. 1. 1833 fo. Gerhard Auserles. Griech. Vasenbilder, hauptsächlich aus Etrurien, I. Bd. Götterbilder 1840. II. Heroenbilder 1843. III. not yet completed. Trinkschalen des K. Museums 1840. Mysterienvasen 1839. Etr. u. Campan. Vasen des k. Mus. 1843. Apulische Vasenbilder des k. Mus. zu B. 1845 f. m. Vases peints du Duc de Luynes. P. 1840. fo. (Ann. d. Inst. xii. p. 247.) Le Normant and de Witte Elite des mon. céramographiques P. since 1844. T. i. ii. iii. O. Jahn Vasenbilder Hamburg 1839. 4to. By Prof. Roulez at Ghent since 1840. Mélanges de philol. d'hist. et d'antiquités, chiefly vases, extracted from the Bulletins de l'Acad. de Bruxelles T. v—xiii, fasc. 2—5. down to 1846. Descr. dei vasi rinvenuti nelle escavaz. fatte nell' Isola Farnese per ordine di S. M. Maria Cristina—di Second. Campanari. R. 1839 4to., Bull. 1840. p. 12. Vases from the tombs of Panticapæon (Kertsch) in Dubois Voy. en Crimée iv. Sect. pl. 7—15., one with  $\Xi\text{ENO}\Phi\text{ANTO}\Sigma\ \text{E}\Pi\text{O}\text{I}\text{H}\text{-}\Sigma\text{EN}\ \text{A}\Theta\text{HN}$ . (Bull. 1841. p. 109.) and one pl. 13. with the torch race round an altar, therefore perhaps  $\kappa\acute{\epsilon}\rho\alpha\mu\omicron\varsigma\ \text{A}\tau\tau\iota\kappa\acute{o}\varsigma$ .]

## 2. DESIGNING BY THE JUNCTION OF SOLID MATERIALS, MOSAIC-WORK.

- 1 322. Mosaic, in the widest sense of the word, any work which produces a design or painting on a surface by the joining together of hard bodies, comprises the following kinds: 1. Floors formed of pieces of stone of different colours, geometrically cut and cemented together, *pavimenta sectilia*. 2. Windows, composed of glass-panes of different colours, which appear to have been known at least to later antiquity. 3. Floors inlaid with small cubes of stone forming a coloured design, such as were usual in antiquity, not merely in rooms but also in courts and terraces, instead of pavement, *pav. tessellata*, *lithostrota*,  $\delta\acute{\alpha}\pi\epsilon\delta\alpha\ \acute{\epsilon}\nu\ \acute{\alpha}\beta\alpha\kappa\acute{\iota}\sigma\kappa\omicron\iota\varsigma$ . 4. The finer mosaic, which tried to come as near as possible to pictures properly so-called, and usually employed coloured pieces of clay or rather glass, but also the very costly material of actual stones, where the imitation of numerous local colours was required, called *crustæ vermiculatae*, also *lithostrota*. Splendid works of this description were made of stone as well as clay cubes, as early as the Alexandrine period (§. 163. 6.). The employment of glass cubes in the decoration of apartments, first made its appearance in the time of the emperors, when this kind of mosaic, which came more and more into request (§. 190. R. 4. 212, 4.), was even transferred to the walls and ceiling, and was used in all the provinces (§. 262, 2. 263, 1.); hence there is even now by no means any want of monuments of this kind, among which there are some that may be pronounced

excellent. 5. Glass threads molten together, which in section 5 always give the same extremely tender and brilliant image. 6. Contours and depressed surfaces were engraved in metal or 6 some other hard material, and another metal or enamel melted into it, so that figures resulted from the process—the so-called *niello*. As this kind of work leads immediately to copper-en- 7 graving, so even a certain description of the latter,—an easily multiplied impression of figures,—seems to have been not unknown to antiquity as a transient appearance.

1. On the *pictum de musivo* (the name borrowed from museums, first in Spart. Pescenn. 6. Trebell. Trig. 25.), comp. Gurlitt, s. 162 ff. Ciampini, Furietti (§. 212. R. 4.), Paciaudi *De sacris Christian. balneis*, Cam. Spreti *Compendio istor. dell' arte di comporre i mosaici*. Rav. 1804. L. Bossi, *Lett. sui cubi di vetro opalizzanti degli ant. mosaici*. Mil. 1809. Vermiglioli, *Lezioni* i. p. 107. ii. p. 280. Gurlitt *Ueber die Mosaik* (1798), *Archäol. Schr.* s. 159. Hirt, *Mém. de Berlin* 1801. p. 151.

To the first kind belong also the *Lacedæmonii orbis*, on which the haughty rich man sprinkles the tasted wine, *Juv.* xi, 172., the *parietes pretiosis orbibus refulgentes*, *Senec. Ep.* 86. and often, the *maculæ* inserted contrary to the nature of the stone, *Plin.* xxxv, 1. Probably the *Alexandrinum marmorandi* genus, *Lamprid. Al. Sev.* 25, belongs to these. The *pav. sectilia* were often similar to the modern Florentine mosaic *lavoro di commesso*.

2. *Prudent. Peristeph. hymn.* 12, 45. The passage however is not quite clear. *Comp. R.* iv.

[3. A brick column covered with coloured glass mosaic found in Pompeii in 1837, see Zahn's *Ornamente alter class. Kunstepochen* Tf. 60.]

4. Everything here bears reference to floors, hence the imitations of sweepings (*asaroti œci*, §. 163, 6., comp. *Statius S. i*, 3, 55; *asarotici lapilli*, *Sidon. Apoll. C.* xxiii, 57; a fine *asarotum* by *Heraclitus* found in 1833 at Rome, §. 209. R. 1); the labyrinths originating in meander-ornaments (*Salzburg mosaic* §. 412. R. 1.) and the like. "*Ανθιννα τῶν ἐδαφῶν* in the palace of *Demetrius Phalereus*, *Athen.* xii, 542. The mosaic of glass cubes is designated in *Pliny xxxvi*, 64. by *vitrea camera*; to this refers *Statius, S. i*, 5, 42: *effulgent camerae vario fastigia vitro*, comp. *Seneca, Ep.* 90. *Noted workers in mosaic* (*musivarii*; in the *Theodos. codex* distinguished from the *tesselarii*) besides *Sosus*, *Dioscurides* and *Heraclitus* (§. 209. R. 1.) [on the fine *asaroton* from *Villa Lupi* in the *Lateran . . . . ιτος ηργασατο*, and the other portion of the name is said to be still with the restorer, §. 209. R. 1.], *Proclus* and *J. Soter* (*Welcker, Rhein. Mus. für Phil.* i, 2. s. 289.), *Fuscus* at *Smyrna* (? *Marm. Oxon.* ii, 48.), *Prostatius*? (*Schmidt Antiq. de la Suisse*, p. 19.). *Celebrated mosaics* besides those mentioned §. 163: 1. The *Prænestine*, from a tribunal (comp. *Johannes Ev.* 19, 13.), which can scarcely be that of *Sulla* (*Plin.* xxxvi, 64.), a natural-historical and ethnographic representation of *Egypt*. *Del. Jos. Sincerus*, sc. *Hieron. Frezza.* 1721. *Bartoli Peint. ant.* 34. comp. *Mém. de l'Acc. des Inscr.* xxviii. p. 591. xxx. p. 503. *L. Cecconi, Del pavimento in mus. rinv. nel tempio d. Fortuna Prænest.* R. 1827, opposite views in

C. Fea, *L'Egitto conquistato dall' Imp. Cesare Ott. Aug. sopra Cleopatra e M. Ant. rappr. nel mosaico di Palestrina*. [R. 1828. 4to. A striking explanation, which is confirmed on all sides. In like manner is the reception of Io by Egypt represented in Pompeian pictures §. 351. R. 4. Visconti also conjectured it to be Octavian as conqueror of Egypt M. PioCl. vii. p. 92., Idem in Laborde Mos. d'Italica p. 90. The best coloured copy is that of Barthelemy in the 2nd ed. of his Treatise, of which only 30 copies were printed; a new one is a necessity for the history of painting. There is an antique copy of a small portion at Berlin, according to Uhden in the *Schriften der Berl. Akad. für 1825*. S. 70 f.] Comp. §. 435.

2. The Capitoline mosaic with the spinning Hercules from Antium, M. Cap. iv, 19. 3. That in the Villa Albani, executed in a particularly fine manner, Hercules as the deliverer of Hesione, Winck. M. I. 66. 4. The one from Hadrian's Tiburtine villa with the battle of the panthers and centaurs, in æd. M. Marefusi, Savorelli del. Capellani sc. [in execution the finest of all, now in Berlin, Bull. 1845. p. 225.; it appeared in the M. d. I. for 1847. Two important pieces also in the Quirinal palace from Villa Hadriana,—a youthful colossal head and a great number of birds, separated by trellis-work]. 5. That from Præneste in Villa Barberini, the rape of Europa, Agincourt, Peint. pl. 13, 8. 6. The large mosaic from Otricoli, in different compartments (Medusa's head, centaurs, nereids, &c.), PCl. vii, 46. (others 47–50.). 7. Scenes from tragedy and the satiric drama in the PioClem. Millin, *Descr. d'une mosaïque antique du M. PCl. 1819*. fo. 8. The large mosaic from Italica ( $38 \times 27\frac{1}{2}$  feet, Muses' heads and circus games) of which a minute account has been given especially by Laborde §. 262. R. 4. Comp. §. 424. R. 2. Mosaic of Toulouse. §. 402. R. 3. Theseus and Minotaur &c. in Pompeii, Bull. 1836. p. 7. Mosaic work in relief, Welcker, *Zeitschr. für a. K. S.* 290 ff. [The Pembroke mosaic relief here referred to No. 1. (Winck. W. 3. S. xxxiii.) is described and praised by Waagen *Kunstw. in England* ii. S. 279 f. The Hesperid is not wanting along with Hercules. R. Rochette *Peint. inéd.* p. 393—96. 427—30., where Spes is given in pl. 12. Besides the repetition of this one in Caylus, I saw the upper part of another in the Mus. at Lyons 1841. There are pastes and stones combined, in the two figures from Metapontum, formerly in the possession of the archbishop of Tarantum, now in the St. Angelo coll. at Naples. In the mus. at Naples there now hung up 28 pieces of smaller mosaics; there are several such specimens in the Vatican in Appart. Borgia, engraved in Guattani 1784. p. xxxiii. tv. 3., one of the best in Santa Maria in Trastevere, a pair of ducks and other aquatic fowls, one in Vienna, about 2 feet high, five warriors, the foremost of whom hurls a torch, the symbol of war (Eurip. *Phœn.* 1836. c. Schol.), as *πυρφόρος*, Arneth *Beschr. der zum k. k. Antiken-Cab. gehörigen Statuen u. s. w.* S. 15. The floors in the Vatican in 9 pl. fol. m. by different designers and engravers; one from Sentino at Munich in the furthest back vase-room, Apollo in the oval Zodiac, the four seasons underneath: Mosaic Lupi, Bull. 1833. p. 81. Achilles dragging Hector, found in 1845 at Rome before the Porta S. Lorenzo, with another floor, entirely of small stones; Poseidon and Amphitrite drawn by sea-horses in Algiers, Bull. 1846. p. 69. Artaud *Hist. abrégée de la peint. en mosaïque* Lyon 1835. 4to. gives a list of the mosaics in Lyons and the south of France; that of Avenches in Schmitt, *Rec. d'antiquités de la*



Suisse 1771. 4to. Secchi Il mus. Antoniano rappres. la scuola degli Atleti R. 1843. 4to. (in the Lateran); W. Henzen Explic. musivi in villa Burghesia asservati, quo certamina amphiteatri repræsentantur, R. 1845. 4to., discovered in Tusculum in 1834. On a floor found in London, in the East India House, Bacchus on the panther, fine workmanship. A large floor at Cologne, found in 1844, seven busts of wise men, among whom are Socrates and Sophocles, Diogenes in the centre, see Urlichs in the N. Rhein Mus. iv. S. 611. Juvavienische Antiken, Salzburg 1816. 4to. In Salzburg Theseus and the Minotaur, who frequently occurs in mosaics, see O. Jahn Archäol. Beitr. S. 268 f.—Statius Silv. i, 3, 55.—*Varias ubi picta per artes Gaudet humus superare novis asarota figuris.*]

5. Winck. W. ii. s. 40. Klaproth and Minutoli Ueber antike Glasmosaik. B. 1815.

6. On Egyptian metal-painting §. 230, 4. On draperies of statues §. 115. R. 2. 306. R. 3. Bronze tablets with pictures in different metals in India? Philostr. V. Apoll. ii, 20. Remains of ancient enamel-work, Völkel's Nachlass, s. 33. On niello works (*μέλαν*, Ducange, p. 898.), Fiorillo Kunstbl. 1825. N. 85 ff. Böttiger Archäol. der Mahl. s. 35. [Creuzer, Zeitschr. f. AW. 1843. S. 1076, in his Schriften zur Archäologie iii. s. 552. 556 ff.] On the agemina work of the *barbaricarii* (who besides made draperies of gold or with gold) §. 311. R. 3. Ant. di Ercol. viii. p. 324. [alla gemina or damaschina the so-called Vase of Mithridates in the Capitol.]

7. The much commented on passage in Plin. xxxv, 2. regarding Varro's iconography (*munus etiam diis invidiosum*), which was pictorially multiplied and sent everywhere, will scarcely allow us to imagine anything else than impressed figures. Comp. Martial xiv, 186. Becker's Gallus i. s. 192 ff. [Comp. §. 421. R. 4. Kunstmus. zu Bonn S. 8 or 2nd ed. S. 5 f. Creuzer in the Zeitschr. f. AW. 1843. N. 133 ff.]

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## II. OPTICAL TECHINICS.

323. The artist endeavours, by moulding the given mate- 1  
 rial, or by laying on colours, to furnish the eye and the mind  
 of the beholder with the appearance and representation of  
 bodies, such as they are to be found in nature. He attains 2  
 this in the simplest way by a complete imitation of the body  
 in a *round* form (*rondo bosso*): at the same time with the  
 great advantage that the eye is not confined to the enjoy-  
 ment of one, but receives *many* images or views, among which  
 however, and that still more in groups than individual sta-  
 tues, *one* will always be the most important to the artist.  
 However, alterations in the form are rendered necessary, 3  
 sometimes by the elevated position, sometimes by the colossal  
 size of the statue; these are conditioned by the point of view

- from which they are seen by the beholder, whose eye should receive the impression of a natural and well-fashioned form.
- 4 The problem becomes more complicated when the natural forms, pressed down as it were on a surface (a process which has always its cause in the subordination of the plastic art to tectonic aims), are to be exhibited in a weaker play of light and shade than round work admits of, such as is the
- 5 case in the different kinds of RELIEF. But the task becomes a complete optical problem, when a view of the object is to be attained by applying colours on a *plane surface*, as the impression of reality can only be produced by the representation of the surfaces of the body as they appear from a definite point of view, for the most part foreshortened and displaced, and principally by imitation of the effects of light on them, that is, only by observation of the laws of PERSPECTIVE and OPTICS.

4. The ancients do not appear to have had any perfectly settled terminology, in applying names to the different kinds of relief (§. 27). *Zōon* a work of sculpture in general, figure; see for instance Plat. Pol. p. 277. Comp. Walpole, Memoirs, p. 601. [Welcker Theogn. p. lxxxix. not. 627.] *Zōa περιφανῆ* distinctly denotes round figures in Athen. v, 199 e. (like *ξύλα περιφανῆ*, Clem. Protr. p. 13); on the other hand, in the same author, v, 205 c. *περιφανῆ ζώδια* are alti relievi. *Πρότυπα* (*πρόστυπα*, Athen. v, 199 e.) and *ἔκτυπα* are in Plin. xxxv, 43. opposed to one another as alto and basso relievo, and yet *ἔκτυπα* in Plin. xxxvii, 63. and Seneca, De benef. iii, 26. is relief generally [in Pliny better manuscripts have *prostypa* as relief generally, or flatter than *ectypon*.] On other occasions, *τύπος*, *διατετυπωμένα*, §. 237. R. 1., *ἐκτετυπωμένα ἐπὶ στήλῃ* Paus. viii, 48, 3. and *ἐπειργασμένα* are used as expressions for relief. Projecting animal-heads are *πρόκροσσοί*, *προτομαί*. Comp. §. 324. R. 2.

- 1 324. Now, although ancient art did not set out from the conception of the single optical image, but rather invariably from corporeal imitation, and this always remained a principle with it, so that the relief was treated in a statuesque manner, and painting for the most part in the style of relief; yet, in the period of its perfection, it was by no means deficient in the observance of the laws of perspective, which were already
- 2 put greatly in requisition for COLOSSAL STATUES. In the RELIEF, art originally followed the principle of representing every part of the body in the fullest and broadest possible view; the development of art, however, introduced a greater variety of
- 3 phases, and a generally moderate use of foreshortening. Perspective was, from the time of the elder Cimon (§. 99, 1.), of more importance to PAINTING, and this even gave rise to a separate branch of perspective painting, scenography or scia-graphy, in which, notwithstanding the resistance of enlightened artistic criticism, more careful and delicate design was sacrificed to the attainment of illusive effects for distant

beholders unskilled in art. But, in general, the complete 4  
 representation of forms in their beauty and significance, was  
 more highly regarded by the ancients, than the illusion re-  
 sulting from the perspectively accurate foreshortening and  
 contracting of figures; and the prevailing taste conditioned  
 and limited the exercise and development of those optical  
 laws and artistic dexterities, differently, indeed, according to  
 the periods and branches of art, in easel-pictures less than in  
 reliefs and vase-monochromes, in a later and luxurious age  
 less than in earlier times, but on the whole, however, in a far  
 higher degree than in the modern development of art, which  
 takes quite the opposite direction. From that feeling of forms 5  
 which desires to perceive with clearness, and to enjoy in their  
 refinements, eurhythmy and graceful purity of contour, resulted  
 also the slight attention of the ancients to AERIAL PERSPECTIVE,  
 —judging at least from the mural paintings preserved,—that  
 is, the faintness of outlines and blending of colours produced  
 by the greater or smaller stratum of air which the optical image  
 of the object pervades, as it is evident that the ancient painters  
 were generally accustomed to hold the objects near the eye, or to  
 conceive a clear atmosphere as the medium. Hence also light 6  
 and shade appeared to the ancient painters more calculated  
 for modelling single figures, than for contrasts of masses and  
 similar general effects.

1. Phidias' Olympian Zeus is one of the chief examples, §. 115, 1. General evidences, Plat. Soph. p. 235 sq. (who on this account considers colossal formations as belonging to the *φανταστική*, not to the *εἰκαστική*). Tzetz. Chil. xi, 381. Comp. Meister, De optice fictorum, N. Comment. Soc. Gott. rec. vi. cl. phys. p. 154.

2. The principle here laid down occasioned the strange posture of the Egyptian (§. 229.), as well as the Selinuntine relief-figures (§. 90.), only that the heads in the latter appear in front view, in the former in profile. On the other hand, the relief-figures on the Attic tombstones (*οἱ ἐν ταῖς στήλαις κατὰ γραφὴν ἐκτετυπωμένοι*, Plat. Symp. p. 193.) appear entirely in profile, as if sawn through the middle of the nose. (Here *γραφὴ* is a delicate relief; for to connect *καταγραφὴν*, is untenable for this reason alone, that *catagrapha* in Plin. xxxv, 34. denotes quite the reverse, namely foreshortenings). In the bas-reliefs likewise of the Parthenon by far the greatest number of the figures are seen in profile; violent foreshortenings are avoided, and even many foreshortenings which to us seem necessary, for example in the legs of riding figures, are sacrificed to the striving after eurhythmy of forms, §. 118, 3. In the alti relievi of Phigalia, on the contrary, very great foreshortenings are ventured on, comp. §. 119, 3.—In painting *habet speciem tota facies*. Quint. ii, 13., comp. Pl. xxxv, 36, 14.

3. On scenography and sciagraphy §. 107, 3. 136, 2. 163, 5. 184. R. 2. 209, 3. On the perspective of the ancients generally, Heliod. Opt. i, 14. (who describes the *σκηνογραφικόν* as the third part of optics, which

architects, and sculptors of colossi could not do without), of the moderns Sallier, *Sur la perspect. de l'anc. peinture ou sculpt.*, *Mém. de l'Ac. des Inscr.* viii. p. 97. (in opposition to Perrault), Caylus, *ibid.* xxiii. p. 320., Meister, *de optice vet. pictor.*, *N. Commentr. Soc. Gott.* v. cl. phys. p. 175. (incorrect in many points), Schneider *Eclog. phys.* p. 407. *Ann.* p. 262. Böttiger *Archäol. der Mahlerei*, s. 310. That the architectural views of the Herculanean mural paintings contain faults (Meister, p. 162.), proves almost nothing against the studies of real artists.

5. In tabular painting there were many works treated otherwise. Here was displayed from the time of Parrhasius the *ambire se* of the outlines. This denotes probably the floating and flickering character of the contours, which arises in nature from the undulated and stripy nature of light (or from the parallax of the eyes? *Berlin Kunstbl.* ii. s. 94 ff.).

6. See above, §. 133. R. 2., but also 319. R. 7. The delicacy with which shade was marked among the ancients (*lenis, levis, &c.*) is noticed by Beckmann, *Vorrath n. A.* i. s. 245. *Φθορά σκιᾶς* perhaps denotes *chiaroscuro*; *ἀπόχρωσις σκιᾶς*, *cast-shadow*, §. 136. R. 1.—Much attention was also paid in antiquity to the proper hanging of pictures (*tabulas bene pictas collocare in bono lumine*, *Cic. Brut.* 75, 261.) and the right point of view for looking at them (the painter himself often stepped back when at work, *Eurip. Hec.* 802, *comp. Schäfer.*). *Horace Epist. ad Pis.* 361 ff.

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## SECOND PART.

### ON THE FORMS OF THE PLASTIC ART.

§. 324.\* The forms of art are of two kinds. First, *the mere artistic form*, of which nature does not furnish a type, the frame as it were which art puts around a piece of nature, in order to obtain a defined and separate representation; this form, because it does not in itself represent spirit and life, will receive its destination more from mathematical forms, and constitute, so to speak, the connecting link between architecture and the plastic art. Secondly, *the forms presented by nature and experience*, on which rests the internal life of the work of art—the representation of spiritual existence. We shall begin with the latter.

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## I. FORMS OF NATURE AND LIFE

## A. OF THE HUMAN BODY.

## 1. GENERAL PRINCIPLES.

325. The principal form of ancient art was the human 1  
 body, which appeared to the ancient Greeks as the necessary  
 correlative of the mind, as the natural and only expression  
 for it. If the conception of natural events and localities, 2  
 human relations and properties, as divine persons, originally  
 belonged to the religion, and emanated from the deepest founda-  
 tion of the religious notions of antiquity, so afterwards,  
 when this religious manner of thinking had lost its power,  
 the representation of all these objects as human forms became  
 a pure necessity of art; and even independently of worship  
 and belief, art, in following its internal laws, created for itself  
 an immense number of forms of this description. Down to 3  
 the latest period, even to that in which a foreign religion had  
 completely put an end to the earlier manner of contemplating  
 the world (§. 213. R. 2.), it remained a principle and charac-  
 teristic of Greek art to introduce personally in human form  
 the place of an action, the internal motives to it, and the  
 promoting or obstructing circumstances, and, on the other  
 hand, to treat the external appearance of nature as compen-  
 diously as possible, almost only as the attribute of these  
 forms.

1. Sentimental lingering with nature in general, a romantic concep-  
 tion of the landscape (§. 436.) was unknown to the Greek mind; it pressed  
 on impatiently to the apex of corporeal formation, the human figure.  
*Schiller über naive und sentimentalische Dichtung, Werke Bd. xviii.*  
 s. 232.

326. If this, as the nature of the thing requires, is not 1  
 conceived as an individual expedient of the artist, but as a  
 general and pervading principle of ancient art, we may  
 thereby acquire a knowledge of the main principle of Greek  
 art and genuine fundamental law of the artistic activity in  
 antiquity. This was not certainly a rendering and immediate 2  
 imitation of what was externally experienced, beheld, the so-  
 called Real, but a creating from within outwards, a seizing of  
 the spiritual life and impression of it in the form naturally  
 connected therewith. [§. 3. 419, 1.] Even this of course can- 3  
 not take place without a love-inspired imitation of what is  
 presented to the senses; nay, only to the most intimate and  
 ardent conception of this form, the human body, does it ap-  
 pear as the general and lofty expression of an all-pervading

life. But the aim of this imitation was not a reproducing of the individual appearance presented to experience, but the expression of inward vitality, power and spiritual existence. 4 For this reason the formations of Greek art bear from the beginning a certain character of generality, and the portrait properly so-called did not make its appearance until a comparatively late period.

4. In this respect the East is comprehended under quite the same law with Grecian antiquity, and there art stands still further from individual imitation, the character of the forms is still more general, more architectonic.

1 327. Now, however little Greek art, in its best and most genuine times, considered itself entitled to devise forms transcending the body furnished by nature, it just as little thought that, in its main tendency,—for at all times there were also subordinate paths (§. 123, 2. 129, 5. 135, 3.),—it was bound to adopt from the figure what appears to us unessential in relation to the internal life, and as a pure accident, although it is true that even this, in its dark connexion with the whole, may have a particular charm and peculiar value (that of individualizing). 2 On the other hand, there were developed in the Greek schools of art, forms which appeared to the national sense and feeling as those which the undisturbed development of the perfected organism would produce, as the truly healthy, and were therefore in general laid as the basis of the representation of a higher life,—the so-called IDEAL FORMS. 3 Simplicity and grandeur are the chief peculiarities of these forms, from which arose, indeed, no neglect of details, but a subjection of the subordinate parts to the leading forms, which lends 4 to the whole representation a higher degree of clearness. The different characters by which life is artistically represented in its manifold phases and tendencies, appeared sometimes as modifications of these fundamental forms, and sometimes also 5 as intentional deformities. Hence, if it is necessary, on the one hand, to become acquainted with the forms which appeared to the Greek sense to be generally correct, it is of not less importance to learn the significance which the Greeks observed in the separate form of each part.

3. On this principle Winck. W. iv. 53., Eméric David more definite, *Rech. sur l'art statuaire considéré chez les anciens et chez les modernes*. P. 1805. Besides the requirements of the work of art in general which have clear intelligibility and harmonious co-operation for their object, the particular requirements of the material (§. 25, 2.) must also be here taken into account. The dead material admits of less variety of detail than the living body exhibits; transferred to a rigid brittle mass many things offend and repel which in life operate advantageously for the whole. Different materials also have certainly different laws; it seems

from some fragments that the ancients gave more of the veins and other slight elevations and depressions of the surface in bronze than in marble.

## 2. CHARACTER AND BEAUTY OF THE INDIVIDUAL FORMS.

### A. STUDIES OF THE ANCIENT ARTISTS.

328. Although in Greece even surgeons, and much more 1  
 artists, were restrained from the dissection of bodies by an  
 invincible horror; on the other hand, by the opportunity 2  
 which ordinary life presented, especially in gymnastic schools  
 and games (although models strictly so-called were not want-  
 ing), the Greek artists, who possessed in a remarkable degree  
 the talent of apprehension, which was improved by practice  
 to a wonderful degree, acquired an infinitely more accurate  
 knowledge of the living human form in action or preparing for  
 action, than can ever be obtained by means of anatomical  
 studies. And if, in individual instances, some irregularities 3  
 are observable in their productions, yet the works of Greek  
 art in general are more correct and faithful in the represen-  
 tation of nature in proportion as they come nearer to the best  
 times. The statues of the Parthenon exhibit the highest per- 4  
 fection in this respect, but all that is of genuine Greek crea-  
 tion participated in this freshness and truth; while, in many  
 works of the Alexandrine period, art became ostentatious  
 and, as it were, obtrusive, and among the Romans *marmorarii*  
 a certain school, which was only attached to generalities,  
 dispensed with the warmth and immediateness produced by  
 the direct study of nature. The most accurate study of ana- 5  
 tomical science, also, is too weak to appreciate, thoroughly to  
 understand, those masterworks, because it must ever be denied  
 the contemplation of the body unfolding its splendour in the  
 fulness of life and the fire of action.

1. [K. F. Hermann über die Studien der Griechischen Künstler, Gött. 1847. 8vo.] Kurt Sprengel, *Gesch. der Arzneikunde* i, 456. (1821) supposes the first attempts at dissection to be indicated in Aristotle, and assumes as a certainty (p. 524.) that there were such under the Ptolemies. According to others even Galen himself only dissected apes and dogs, and drew conclusions from them to man (according to Vesalius' observation on the *os intermaxillare*). Comp. Blumenbach's lecture *de veterum artificum anatomicæ peritiæ laude limitanda, celebranda vero eorum caractere gentilitio exprimendo accuratione*, Gött. G. A. 1823. s. 1241. On the other hand Hirt, *Schriften der Berl. Akad.* 1820. *Hist. Cl.* s. 296. attempts to prove a synchronistic relation between the development of the art of dissection (from the time of Alcmaeon Ol. 70. ?) and the plastic art. *Studies of the Ancients in Osteology*, Olfers *Ueber ein Grab bei Kumæ* s. 43.

2. Many authors mention the Agrigentine virgins (Crotonian, say others, because the picture was at Crotona) as models of the Helena of Zeuxis. (The combination of separate beauties did not appear to the ancient connoisseurs a thing by any means impossible, see Xenoph. M. Socr. iii, 10. Arist. Pol. iii, 6. Cic. de inv. ii, 1.) Of Theodote, ἡ τὸ κάλλος ἑαυτῆς ἐπέδειξεν, [and was emulously painted by artists,] Xenoph. iii, 11. The bosom of Lais was copied by the painters, Athen. xiii, 588 d., comp. Aristænet. i, 1. The passage Plut. Pericl. 13. also points at female models which Phidias used. Male models indeed never occur; gymnastics of course furnished much finer developments of masculine strength and beauty than the formal postures of an academy. Collection of passages in the ancients on beauty in Junius De pict. vet. iii, 9, of little use.

3. Winckelmann iv, 7 ff. has collected from the ancients the principal passages in reference to the vivacity and enthusiasm with which the Greeks conceived corporeal beauty, and pursued this enjoyment; he has made a few oversights which can be easily rectified.

5. There is no work better calculated to communicate such information in osteology and myology as is most essential to the archæologist than Jean-Galbert Salvage's Anatomie du Gladiateur combattant. P. 1812. fol. In the characterizing and detailed description of statues the forms that come most into consideration are those of the musculus magnus, pectoralis, rectus ventris, m. serrati (dentelés), magni obliqui, magni dorsales, rhomboides, magni and medii glutæi in the trunk, the sternocleido-mastoides and trapezii in the neck and shoulders, the deltoides, biceps, triceps, longus supinator in the arm, and the rectus anterior, internus et externus femoralis, biceps, the gemelli and tendo Achilles in the leg.

#### B. TREATMENT OF THE COUNTENANCE.

- 1 329. The principle of carrying out the contours in as simple a sweep as possible, whereby that high simplicity and grandeur were produced which especially belonged to ancient art, is shown most distinctly in the GRECIAN PROFILE of the forms of gods and heroes, by the uninterrupted extension of the line of the forehead and nose, and, on the other hand, the greatly retreating surface which is prolonged from the chin
- 2 over the cheek in simple and softly rounded swell. Although this profile is certainly borrowed from the beautiful in nature, and is not an arbitrary invention or combination of heterogeneous ingredients, it is not, however, to be denied that plastic necessities influenced its adoption and development; for instance, the sharp arch of the eye-brows and the deep sunk eyes and cheeks, which were carried to excess in the Alexandrine period, were employed in order to produce an
- 3 effect of light to compensate for the life of the eye. To the FOREHEAD, which is bounded by the hair in an unbroken arch, but small height was assigned by the Greek national



taste; hence it was often even shortened intentionally by fillets. Advancing generally in a gently vaulted elevation, it only in characters of remarkable force swells out into large protuberances over the inner corner of the eye. The finely traced arch over the eye, even in statues in which no eyebrows are given, expresses the fine form of these. The NORMAL NOSE, which has the straight direction and a sharply defined flat ridge, occupies the medium between the eagle-nose, the *γρυπὸν*, and the turned-up, snub nose, the *σιμόν*. The latter was on the whole considered ugly, and regarded as a barbarous form; as the Greeks, however, also recognised it as a general peculiarity of children, they fancied that it possessed a *naïve* grace and roguish petulance; hence the race of satyrs and sileni exhibit this nose sometimes in graceful, sometimes in caricatured development. To the EYES, that luminous point of the countenance, the ancient artists communicated a living play of light, by a sharp projection of the upper eye-lid and deep depression of the pupil, size, by greater opening and arching, and the tender and languishing air which was usually called *ὕργον*, by drawn-up and peculiarly formed eye-lids. We may also mention the shortness of the UPPER LIP, its fine form, the gentle opening of the mouth, which, in all statues of the gods that were the products of finished art, enlivens the countenance with a powerful shadow and is often very expressive, and above all,—the most essential sign of genuine Greek formation,—the round and grandly formed CHIN, to which a dimple in a few instances communicates a subordinate charm. The fine and delicate form of the EARS is met with universally except where, as in athletes, they are represented as swollen by frequent blows (*ᾠτα κατεαγῶς*).

1. See Winck. W. iv, 182. On the other hand Lavater (at that time not without reason) entreated his friends “to wean themselves from the so-called Grecian profiles; they made all faces stupid,” and so forth. Meusel, *Miscell.* xiii, 568.

2. On the relation of the Grecian profile (especially the so-called *angulus facialis*) to nature, P. Camper, *Ueber den natürl. Unterschied der Gesichtszüge des Menschen*, s. 63. who denies the reality of that profile. The opposite view taken by Eméric David, *Recherches*, p. 469. Blumenbach, *Specimen historiae nat. artis opp. illustratae*, Commentt. Soc. Gott. xvi. p. 179. Sir Charles Bell, *Essays on the Anatomy and Philosophy of Expression*, 2d ed. (1824.) Ess. 7. Pæster, *Versuch einer Griechen-Symmetrie des menschl. Angesichts* in Daub and Creuzer's *Studien* ii. S. 359.—The principal passage on the Greek national form, in which the Greek profile is also recognised, is Adamanteos *Physiogn.* c. 24. p. 412. Franz: *Εἰ δὲ τισι τὸ Ἑλληνικὸν καὶ Ἰωνικὸν γένος ἐφυλάχθη καθαρῶς, οὗτοί εἰσιν αὐτάρκως μεγάλοι ἄνδρες, εὐρύτεροι, ὄρθιοι, εὐπαγεῖς, λευκότεροι τὴν χροάν, ξανδοί· σαρκὸς κρᾶσιν ἔχοντες μετρίαν, εὐπαγεστέραν, σκέλη ὄρθα, ἄκρα εὐφυῆ κεφαλὴν μέσην τὸ μέγεθος, περιαγῆ· τράχηλον εὐρωστον· τρίχωμα ὑπόξανθον,*

ἀπαλώτερον, οὐλον πράως· πρόσωπον τετράγωνον, χεῖλη λεπτά, ῥίνα ὀρθήν· ὀφθαλμοὺς ὑγροῦς, χαροπούς, γοργούς, φῶς πολὺ ἔχοντας ἐν αὐτοῖς· εὐοφθαλμότετον γὰρ πάντων ἔθνῶν τὸ Ἑλληνικόν (the ἐλίκωπες Ἀχαιοί of Homer). Among modern travellers who praise the beauty of the Greeks Castellan is particularly enthusiastic, *Lettres sur la Morée* iii. p. 266. [Stackelberg in the preface to his *Griech. Trachten*.]

3. *Frons tenuis, brevis, minima*, Winck. *ibid.* p. 183 sqq. Ὀφρύων τὸ εὐγγραμμον §. 127. R. 4. The beauty of the *σύννοφρον* cannot be pointed out in art. [*celsæ frontis honos*, Statius *Sylv.* 1, 2, 113.]

4. Ῥίς εὐθεία, ἕμμετρος, σύμμετρος, τετράγωνος (Philostr. *Her.* 2, 2. 10, 9.) [cf. *Annali d. I.* vi. p. 208. *Aristæen.* i, 1. p. 216. Boisson], see Siebelis on Winck. viii, 185. Ῥίς παρεκβεβηκυῖα τὴν εὐθύτητα τὴν καλλίστην, πρὸς τὸ γρυπὸν ἢ τὸ σιμόν, *Arist. Polit.* v, 7. The Aristotelian *Physiogn.* p. 120. Fr. compares the *γρυπὸν* with the profile of the eagle, the *ἐπίγρυπον* with that of the raven. In the same way are related *σιμὸς* (*repandus, supinus, resimus*) and *ἐπίσιμος*. The *σιμότεραι, ἀνάσιμοι*, stand opposed to the *σεμναί*, *Aristoph. Eccl.* 617. 938. The negro *sima nare*, *Martial.* Children, *Arist. Problem.* 34. The mask of the peasant, *Pollux* iv, 147. *Σιμὰ γελᾶν*, roguishly, Winck. v, 581. *Σιμὸς* has the same root with *σιλὸς, σιλλὸς, Σιληνός*. *Simula Σιληνῆ ac Σατύρα est*, *Lucret.* iv, 1165. The lover, according to Plato (Plutarch, *Aristænetus*), calls the *σιμὸς ἐπίχαρις* as well as the *γρυπὸς βασιλικός*. As resembling the satyrs the *σιμοὶ* are also *λαγνοί*, *Arist. Physiogn.* p. 123. Comp. Winck. v, 251. 579. vii, 93.

5. [Beauty of connected eye-brows, *Jacobs and Philostr. Im.* p. 60, 29. Blue eyes (*γλαυκοί*) ugly, *Lucian Dial. meretr.* 2.] On the *ύγρον* Winck. iv, 114. vii, 120. *Aphrodite* has it, §. 127. R. 4.; but also *Alexander*, see §. 129, 4., likewise *Plut. Pomp.* 2. The Romans put for it *pætus, sup-pætus*, of which *strabus, squint-eyed*, is the excess. In the execution of the eyes in later times (§. 204. R. 2. Winck. iv, 201.), the true principles of the plastic art were sacrificed to a trivial imitation of nature.

6. To the *χεῖλη λεπτά* was opposed the *πρόχειλον*, which was usually united with the *σιμόν*. The gentle opening, *χεῖλη ἠρέμα διηρημένα*, was also considered beautiful in nature. [*χεῖλη διηρημένα*, *Aristæen.* p. 213, *προχειλῖδια* *Poll.* ii, *πρόχειλος, labrosus, λεπτόχειλος*.] On the *νύμφη* in the chin, Winck. iv, 208. *Varro Παπίας πάππος*, p. 297. *Bip. and Appul. Flor.* p. 128. commend the *modica mento lacuna* as a beauty. The *gelasinus* in the cheeks also only becomes satyresk beauties.

7. Winck. has first thrown light on this subject ii, 432. iv, 210. M. I. n. 62., comp. *Visconti PCl.* vi. tv. 11. p. 20. Comp. the representation of such ears from a bust of *Hercules* in the *M. Napoléon* iv, 70., and in the engravings to Winck. iv. tf. D. Ὦτοκάταξις, ὠτοθλαδίας, κλαστός (*Reuvens, Lettres à Letr.* iii. p. 6.).

1 330. In Greek art even the HAIR was characteristic and significant. For although thick and long hair was usual in Greece (from the time of the *καρηκομόωντες Ἀχαιοί*), on the other hand the custom of wearing it cut short prevailed among the *ephebi* and *athletes*, and a close-lying, slightly

curled head of hair denotes in art figures of this kind. In 2 very masculine and powerful shapes this short-locked hair assumes a stiffer and more crisped form; on the contrary, 3 more expanding hair, curling down over the cheeks and neck in long curved lines, was regarded as the sign of a more soft and delicate character. A proud and lofty feeling of inde- 4 pendence seems to have had as a symbol among the Greeks, hair which reared itself as it were from the middle of the forehead and fell down on both sides in large arches and waves. The particular fashion of the hair, in individual gods 5 and heroes, which is in general very simple, was sometimes determined by the costume of different tribes, ages and ranks, but, in the genuine Greek period, the hair was always arranged with care and elegance, and, at the same time, in a simple and pleasing manner. The shaving of the BEARD, which was 6 first introduced in the time of Alexander, and even then met with much resistance, very clearly distinguishes later from earlier figures. The artistic treatment of the hair, which in 7 sculpture has always something conventional, resulted, in earlier times, from the general striving after regularity and elegance, and, afterwards, from the endeavour to produce, by the sharp separation of the masses, effects of light similar to those observable in the natural hair.

1. The *short hair of the ephēbi* has its natural reason in this, that the hair cherished in boyhood was then first cut off (often in honour of deities and rivers). Symbolism of the cutting of the hair, Soph. Aj. 1179 (1158). Instead of the elegant knots (κόννος, σκόλλυς, in general κῆπος), the simple mode of wearing the hair, σκαφίον, was then used (comp. Lucian Lexiph. 5. with Thuc. ii, 62. Schol. Aristot. Birds 806. Athen. xi, 494.). Add to this the gymnastic advantages of short hair; hence Palæstra in Philostr. Imagg. ii, 32. has short hair. Comp. §. 380. (Hermes). Ἐν χερσὶ ἀποκεκαρμένους ὥσπερ οἱ σφόδρα ἀνδρώδεις τῶν ἀθλητῶν, Luc. Dial. Mer. 5, 3.

2. Οὐλός, βλοσυρός τὸ εἶδος, Pollux iv, 136. Comp. §. 372 (Ares). 410 (Heracles).

3. See §. 383 (Dionysus). Especially Eurip. Bacch. 448: πλόκαμός τε γάρ σου ταναός οὐ πάλης ὑπο (it is not made so long and slack in the game of wrestling), γένυν παρ' αὐτήν κεχυμένος, πόθου πλέως. Τριχομάτιον μαλακὸν as a sign of the δειλός, Arist. Physiogn. 3. p. 38. (p. 807. Bekker) Τετανόθριξ.

4. Thus in Zeus, §. 349. This kind of hair is called ἀνάσιμον or ἀνάσιλλον τρίχωμα, Pollux iv, 138. Schneider Lex. s. v. [Hemsterh. Anecd. p. 206.], and is a feature which belongs to the lion, Arist. Physiogn. 5. p. 81; in men it denotes the ἐλευθέριον, ibid. 6. p. 151. On the ἀναχαιτίζειν τὴν κόμην, Poll. ii, 25, and below §. 413 (Achilles). Of Alexander §. 129. R. 4. The opposite is ἐπίσειστος, like Thraso according to Poll. iv, 147.

5. The early Ionic fashion of the κόρυμβος, κρωβύλος or σκορπίος (Winck. vii. s. 129. Naeke, Choeril. p. 74. Thiersch, Act. Phil. Mon. iii, 2. p. 273. Götting, Arist. Pol. p. 326) was a bow of hair fastened above

the forehead, which is perhaps most distinctly seen in the antique arrangement of the hair in the *κόραι* in the temple of Minerva Polias (§. 109. R. 4). In general use among the earlier Athenians, and even a favourite mode in male statues (see §. 421. R. 1. and Serv. ad *Æn.* x, 832.), it was afterwards kept up especially among the young, hence in art it is found in Apollo, Artemis and Eros. The rows of curls above the forehead in statues of the old style seem to be the *προκόττα*, which was probably Doric, Pollux ii, 29. Photius s. v. [*βόστρυχοι*, Ann. d. Inst. vi. p. 205.] On the Doric knot of hair on the crown of the head, see Dorians ii. p. 288. The Hectorian hair was copious in front and fell down upon the neck (Poll. *ibid.*; the Thesean or Abantic was cut away short in front, Plut. Thes. 5. Schol. Il. ii, 11. Very ingenious braids of hair on female heads are to be seen on Sicilian coins. On the want of taste in later times §. 204, 2. 205, 3. Hadr. Junius de coma. Roterod. 1708.

[6. Plut. Lysand. 1. Λυσάνδρου δὲ ἐστὶν εἰκονικός, εὖ μάλα κομῶντος ἔδει τῷ παλαιῷ καὶ πύγωνα καθεϊμένου γενναῖον.]

7. See especially Winck. W. iv, 219.

#### C. TREATMENT OF THE REST OF THE BODY.

- 1 331. From the head downwards, the THROAT, NECK, and SHOULDERS are particularly adapted to distinguish powerful figures, and gymnastically developed, from more delicate forms;
- 2 in the former the sternocleidomastoides, trapezius and deltoïdes musculus are of considerable size and a swelling shape, as in the bull-necked Hercules most especially; in the latter, on the contrary, the neck is longer, more languid, and has a
- 3 certain slackness and flexibility. The BREAST in men is not in general particularly broad in ancient statues; in the form of the female breast we can distinguish, irrespectively of the forms of different ages and characters, the youthfully vigorous, more pointed than expanded form of early art, from the fuller and rounder shape which afterwards became general.
- 4 The three intersections of the musculus rectus on the WAIST, as well as the line of the hips below the rectus ventris and the magni obliqui, are in male figures usually marked with
- 5 particular sharpness. The remarkable size of the musculi glutæi in early Greek reliefs [especially in the oldest metopes of Selinunte,] and vase-paintings, recalls Aristophanes' representation of the youths of the good old stamp. The great leading muscles are everywhere rendered especially prominent, and presented in all their strength, as, for example, in the magnus internus (*ἐπιγοννίς*) of the thighs, the large development of
- 7 which is characteristic of masculine forms. In the knees is especially displayed the talent of finding the just medium between too sharp indication of the separate bones and parts, and a superficial and ignorant treatment of them.

1. Excellent remarks, for that diagnosis of art, which gathers the character from the particular muscles, are to be found in the ancient physiognomists, especially the Aristotelian treatise, which, however, is not altogether Aristotle's. Hercules is admirably described in the *ἀνδρείος*, p. 35: *τρίχωμα σκληρόν* (§. 330, 2.) — *ἰμοπλάται πλατεῖαι καὶ διεστηκυῖαι, τράχηλος ἑρβώμενος, οὐ σφόδρα σαρκώδης, τὸ στῆθος σαρκῶδες τε καὶ πλατὺ* (comp. *ἀπὸ στέρνων πλατὺς ἦρας* Theocr. 24, 78). *ἰσχίον προσεσταλμένον γαστροκνημῖαι* (musculi gemelli) *κάτω προσεσπασμένοι. ὄμμα χαροπὸν οὔτε λίαν ἀνεπτυγμένον, οὔτε παντάπασι συμμύον.* The comparison attempted by modern writers, not without ingenuity, of different characters with animals (Zeus with the lion, Hercules with the bull, &c.) was already carried out here with great skill.

2. Of the palæstrian neck, Philostr. Heroica 19, 9. Juv. iii, 88. puts the *longum invalidi collum* in contrast to the *cervices Herculis*. A neck of the former kind is usually too flexible, and indicates the weakling; the *τράχηλος ἐπικεκλασμένος* (Lucian), whence *κλαυσαυχενίζειν* Plut. Alcib. 1. The highest degree of this *laxa cervix* (Pers. i, 98. comp. Causaub.) is the *capita jactare* of the Mænads. Opposed to such are the *cervices rigidæ*, the *caput obstipum* (Suet. Tib. 68. Pers. iii, 80), which denotes a sullen and haughty disposition.

[3. Ὁρθοτίτιδος. Terence Eunuch. ii, 3, 21. *Haud similis virgo est virginum nostrarum, quas matres student Demissis humeris esse, vincto pectore, graciles ut fiant.*

4. Form of the belly, T. H. Anecd. p. 168.]

5. Aristoph. Clouds 1011. *ἔξεις αἰεὶ στῆθος λιπαρὸν, χροῖαν λαμπράν, ὄμους μεγάλους, πυγὴν μεγάλην.*

6. The *ἐπιγοννίς*, which is minutely described by Pollux ii, 189, and Apollonius Lex, is in the Odyssey a criterion of powerful muscular development, because in the high girding of the drapery it presented itself in all its roundness, as is particularly shown by Heliodorus as quoted by Schneider.

7. Of beautiful hands and feet Winck. iv, 223 ff. *Χεῖρες ἄκραι καὶ πόδες τὰ λαμπρὰ τοῦ κάλλους γνωρίσματα* Aristæn. i, 6. [Beauty of the hands, Isis von Oken 1824. s. 236.]

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D. PROPORTIONS.

332. The principles which the ancients followed in regard to proportions (*ἑυθμός*, *symmetria*, *numerus*)—and we know that this was a main object of artistic study (§. 120. 130)—are naturally difficult to discover and determine, on account of the manifold modifications introduced by the application of them to different ages, sexes and characters. It is likewise quite impossible to discover the ancient canons, if we do not distinguish the shorter, or, to use the ancient expression, square proportions of early art, which had their origin in the Greek

national conformation (§. 329. R. 2.), from the more slender forms of later art, which emanated more from artistic principles and aims, and, moreover, do not neglect to consider the intermediate stages (§. 130, 2.). While the moderns take the height of the head as a unit for their basis, the length of the foot was employed by the ancients as a measure, whose proportion to the entire height was in general maintained.

2. On the rhythm of the formative art Lange on Lanzi, s. 44 f. Schriften s. 281. Measurements from statues, by Sandrart ii, 1., Audran, Les proportions du corps humain. P. 1683. Morghen and Volpato, Principii del disegno, especially Clarac (from 42 principal statues), Musée de Sculpt. p. 194 sqq. In these the head is taken as unit and divided into quarters: *a*, from the crown to the roots of the hair over the forehead; *b*, to the root of the nose; *c*, to the upper lip; *d*, to the bottom of the chin. But *a* and particularly *b* are less (especially in the older style) than *c* and *d*. Vitruvius iii, 1, recognises *a*, *b*, *c* as equal, with him *d* is somewhat smaller. Comp. Winck. iv, 167, who communicates Mengs' views. Each quarter is then divided into 12 minutes. The older proportions are seen for example in the Æginetan statues, among which no. 64 has 6, 1, 12 for the entire height, no. 60. (Pallas) 7, 0, 5; the Borghese Achilles (a work in the style of Polyclitus) 7, 1, 11; Apollo Sauroctonus 7, 0, 9, and the Capitoline Faun (works of Praxiteles) 7, 3, 6; a Niobid (one of the most slender) 8, 1, 6. According to Lysippus' canon are executed for instance the Dioscurus of Monte Cavallo, 8, 2, 6; the Farnesian Hercules 8, 2, 5; Laocoon 8, 3, 5. In regard to *individual* parts three distances are usually about equal: *a*, from the upper commencement of the sternum to the bottom of the abdomen; *b*, from the navel to the upper commencement of the knee-pan; *c*, from thence to the sole of the foot. However the following difference is here remarked. In the Æginetan statue no. 64 they increase in this order: *a* (1, 3), *b* (1, 3, 4), *c* (2, 0, 4); in the Borghese Achilles *a* and *b* are equal (2, 1, 7), *c* considerably smaller (2, 0, 9); in the Capitoline Faun and the Dioscurus *b* is considerably larger than *a*, and *c* on the contrary equal to *a*. (In the Faun *a* is 2, 1, 9, *b* 2, 2, 9, *c* 2, 1, 9; in the Dioscurus *a* 2, 2, 5, *b* 2, 2, 11, *c* 2, 2, 5.) In the Farnesian Hercules *c* is equal to *b* (*a* 2, 2, 5, *b* 2, 2, 9, *c* 2, 2, 9); in the Apollo Belvidere *c* rises above *b* so that the proportions increase in the order *a*, *b*, *c*. (*a* 2, 1, 4, *b* 2, 1, 5, *c* 2, 1, 9). From the above may be drawn the following result. The Æginetan school gave short bodies and long legs to male figures (as did also the artists of Phigalia to the Amazons); in the Polyclitan canon the upper parts predominate a little; the further development of art, on the other hand, again introduced a predominance of the lower supporting parts. But in children *a* always remained considerably greater than *b*. It is moreover worthy of remark that the *earlier* statues make the length of the sternum,  $\alpha$ , greater than the distance from the sternum to the navel,  $\beta$  (the Æginetan statue has  $\alpha$  0, 2, 11,  $\beta$  0, 2, 9; the so-called Theseus of the Parthenon  $\alpha$  0, 3, 3,  $\beta$  0, 3, 1; the Achilles  $\alpha$  0, 3, 5,  $\beta$  0, 3, 3); the *later* statues, on the contrary, reverse the proportions (in the Farnesian Hercules  $\alpha$  is 0, 3, 6,  $\beta$  0, 3, 6½; in the Paris Faun  $\alpha$  0, 3, 2,  $\beta$  0, 3, 4; the Dioscurus  $\alpha$  0, 3, 1,  $\beta$  0, 3, 10; the Apollo Belvidere  $\alpha$  0, 3, 0,  $\beta$  0, 3, 9; the Apollino  $\alpha$  0, 2, 8,  $\beta$  0, 3, 8). We see

that the breast is shortened more and more in proportion to the belly. The greater breadth of the breast, measured from the sternum to the external part of the shoulders, characterizes heroes, as the Herc. Farn. (1, 1, 6) and the Diosc. (1, 1, 1), in contrast to ungympnastic figures, as the Paris Faun (0, 3, 8), and women (Medic. Venus 1, 0, 0, Capitol. Venus 0, 3, 4). Comp. §. 331. R. 1.

3. Winckelmann's assertion that the foot in slender as well as in compact figures always remains on the whole  $\frac{1}{6}$  of the entire height (iv, 173. comp. Vitruv. iii, 1. iv, 1.), is confirmed in most cases; at least the foot becomes larger in proportion to the head when the figure is more slender. Hence the foot is in Achilles 1, 0, 9; the Niobide 1, 1, 2; the Dioscurus 1, 1, 3; Farn. Hercules 1, 1, 6.—On the whole it remains between  $\frac{1}{6}$  and  $\frac{1}{7}$ . The proportions in Vitruvius iii, 1. I hold to be later than those of Polyclitus. According to Vitruvius the height of the face up to the root of the hair is  $\frac{1}{10}$  of the whole height (the palm also is the same); the height of the whole head from the chin or nape of the neck upwards  $\frac{1}{8}$ ; the height from the upper end of the sternum to the root of the hair  $\frac{1}{7}$ , to the crown  $\frac{1}{6}$  (as Hirt reads); the foot  $\frac{1}{6}$ ; the height of the breast  $\frac{1}{6}$ ; the cubitus  $\frac{1}{6}$ . The navel forms the centre of a circle which circumscribes the points of the outstretched hands and feet.

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E. COLOURING.

333. The ancients likewise made a very clear distinction 1 by the colouring between athletic forms, which had a great resemblance in their hue to bronze statues, and delicate female figures, or even youthful forms of the male sex. A 2 white skin and fair hair were attributes of juvenile deities; however it was found that the latter did not produce a good effect in painting. The red colour denotes fulness of the vital 3 fluid, in which sense it was also symbolically applied.

1. On the colour of athletes §. 306. R. 2. Græci colorati, Manil. iv, 720.

2. See Pollux iv, 136. In Plato Resp. v. p. 474. the white are sons of gods, the μέλανες manly. On the intermediate colour of the skin μελίχρως Jacobs ad Philostr. i, 4. On the colour of the hair Winck. v, 179; antiquity loved black hair in the shade, and brightly shining (ἡλιώσαι) hair in the light (Boissonade ad Eunap. p. 185); but still more a decided blond (hence the gilding); and yet painters even gave black hair to the golden-haired Apollo, Athen. xiii. p. 604.

3. Above, §. 69. R. 309. R. 3. Hence the mask of the σφηνοπέγαν imitated from Hermes, in Pollux iv, 138. is red, of blooming aspect.

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## F. COMBINATION OF HUMAN WITH OTHER FORMS.

- 1 334. The blending of the human form with animal portions, among the Greeks, rested entirely on national ideas, the species called arabesques excepted, in which an unrestrained fancy sported freely about in the world of forms; for the artist did nothing more than give a definite impress and development to the still indistinct and wavering image of popular fancy, which expressed rather a dark idea, than possessed external embodiment in an established shape. And here we find that art in earlier times, ere it had yet mastered the human form in all its fulness of significance, was naturally for the most part disposed to add wings, and otherwise disfigure symbolically the human shape (as is shown in the ark of Cypselus and the Etruscan works of art), although many combinations did not come into favour till later times, such as the giving wings to allegorical figures, which was very extensively practised by artists. In a combined form the human portion always appears as the nobler; and where tradition and fable mention forms entirely animal, art was often satisfied with alluding by slight adjuncts to the animal character.

1. We certainly do the artists injustice if we here regard them as innovators, as Voss does in the *Mythol. Briefen*; only we must everywhere bear in mind, that where the poet describes an action, or activity, the artist, who is confined to objects in space, requires a visible means of designation (*Herder Kritische Wälder* i.), and that where the popular idea is undefined and obscure, art always desires a fixed and clearly marked form. But neither did the Centaurs (*Φήρες ὄρεσκαῖοι*) become more bestial in the hands of the artists (rather more human), nor had the Harpies (the snatchers who appear and disappear as gusts of wind) ever been fair virgins. Strangest of all is the assumption that to Iris, the goddess of the rainbow, the epithet of gold-winged was only applied figuratively, on account of the swiftness of her movements (*Voss Brief* 22).

2. I refer to the ithyphallic deities, who were favourite subjects with earliest art, the gorgon-heads, the lion-headed Phœbus (§. 65.), the four-handed Apollo of Lacedæmon, &c. Artemis with wings on the coffer of Cypselus, §. 363. The winged Athena-Nike on the acropolis of Athens, §. 370., was also probably ante-Phidian; we find it again especially on Etruscan mirrors. According to the *Schol. Arist. Birds*, 574. Archennus (*Ol.* 55.) was the first that gave wings to Nike—earlier accounts could not well be had. [*Eros* see §. 391. *R.* 1. *Dionysus* §. 383. *R.* 9.] Yet the giving wings to such demons was on the whole later. *Panofka*, *Hyperb. Röm. Studien*, s. 254. *Comp. Döring*, *Comment. de alatis imaginibus*, and *Voss Myth. Br.* ii., who divides winged figures into such as are so from corporeal activity, from moral evanescence, and from elevation of mind, to which are also to be added the animals on which the gods rode, or by which their chariots were drawn. [*Zoëga* on the winged deities, in



the Rhein. Mus. 1839. vi. s. 579—91. Gerhard über die Flügelgestalten der a. K. 1840, in the Schr. der Berl. Akad.] On winged chariots R. Rochette M. I. p. 215. On the winged shoes of Hermes §. 379.—In the case of the giants the most ancient was certainly the heroic form, which was almost superseded by the snake-footed.

3. In legend and poetry the satyrs (τίτυροι, τράγοι) are often entirely goats, Dionysus and the rivers altogether bulls, Io entirely a cow, Actæon a stag, and so forth; art is mostly satisfied with the addition of stag and cow horns. In a like spirit the Æsopian fables are represented in Philostratus as children with indications of the animals acting therein, Thiersch, Kunstbl. 1827. No. 19. Animal heads on human bodies, as in the Minotaur, were not relished by Grecian art, comp. §. 228. R. 9.—On fabulous animal forms §. 435.

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G. THE BODY AND FEATURES IN ACTION.

335. As well as the permanent forms which determine the character, it is of course equally important to know in their significance, the transient looks and gestures which produce the EXPRESSION. If much in these is general to humanity and seems to us necessary, on the other hand there are also qualities of a positive nature, that is, derived from the particular views and customs of the nation. Here there is very much indeed to be learned and guessed at, as well by the artist in life as by the science in works of art. In the countenance, besides the eyes, the brows, by which requests are granted or denied (κατανεύεται, ἀνανεύεται, annuitur, renuitur), appeared to the ancients especially expressive of earnestness and pride, the nose of scorn and ridicule. Laying the arm over the head denotes rest, still more completely if both are clasped upon it; supporting the head on the hand calm, earnest reflection. A certain method of extending and raising the right arm, indicates in general the orator; a person in the act of adoration, supplication, or violent lamentation (κοπτόμενος, plangens), is also recognised by the motion of the hand and arm. Claspings the hands upon the knee, in connexion with the corresponding attitude of the rest of the body, expresses gloomy dejection. Extending the hand with the palm upwards (χείρ ὑπέρια) [when asking], is the gesture of receiving; with the palm reversed, of protecting (ὑπερχείριος); similar is the pacifying, as it were down-pressing motion of the arm. Arching the hand over the eyes, a very favourite gesture in the ancient art of dancing as well as in sculpture, denotes looking to a distance, or eager gazing. Crossing the feet over one another, in a standing and leaning posture, appears in general to denote rest and firmness. Those who pray for protection, and the humble, are designated not merely by

9 prostration, but also by half-kneeling. Even the frequently unbecoming and obscene gestures of ridicule (*sannæ*), in which the South was as rich in antiquity as in modern times, are often very important for the understanding of works of art.

1. Permanence of expression. Hence the preponderance of sculpture, the possibility of masks. (Feuerbach *Vatic. Apoll.* s. 342.)

2. On the *eye-brows*, Quintil. xi, 3: *ira contractis, tristitia deductis hilaritas remissis ostenditur*. The word *supercilium* itself as well as *ὄφρουσθαι* points at sullen pride. Pride is especially indicated by the *ἀνασπᾶν, ἀνάγειν* (Eurip. *Iphig. Aul.* 379. *λίαν ἄνω βλέφαρα πρὸς τάνειδές ἀγαγών*); the *συνάγειν* denotes the *φροντιστής*, Pollux ii, 49. Winck. iv. s. 404. On the *nose*, Arist. *Phys.* p. 124: *οἷς οἱ μυκτῆρες ἀναπεπταμένοι* (as they are slightly in the Apollo Belvedere), *θυμώδεις*. Thus also Polemon, p. 299. If the nose is turned up and wrinkled it appears as *σιμῆ*, and thereby receives the expression of petulance (§. 329. R. 4); hence the *διασιμοῦν, σιλλαίνειν*, the *nasus aduncus, excussus, nares uncæ* in Horace and Persius (Heindorf ad Hor. S. i, 6, 5.). Pressing the breath through the contracted nose, *μυχθίζειν, μυκτηρίζειν*, denotes the most bitter contempt united with rage; it is the *sanna qua aër sorbetur*, in Juv. vi, 306 (comp. Ruperti), the *rugosa sanna* Pers. v, 91 (comp. Plum. Persius, as an imitator of Sophron, is rich in such traits, and requires to be recited with aretalogic mimicry). Pan's goat-nose is the seat of *χόλος*, see especially Theocr. i, 18. *οἱ αἰεὶ δριμεῖα χολὰ ποτὶ ῥινὶ κάθηται*, and Philostr. ii, 11. The *nasus* is the critical member. The drawing back of the lips whereby the teeth become visible is *σεσηρέναι*, in a slight degree a sign of good-will (§. 375. Wüstemann ad Theocr. vii, 19), in a greater, of ridicule, R. 9.

3. Examples of the attitude of rest §. 356 (Zeus), 361 (Apollo), 383 (Dionysus), 388 (Ariadne), 397 (Hypnus), 406 (Securitas), 411 (Heracles) and others. The attitude of meditation which Polymnia (§. 393) presents, is described by Plautus, *Mil. glor.* ii, 2, 54. *columnam mento suffulsit suo*, comp. Ter. cod. *Vatic.* fig. 4. Kindred in nature is burying the chin in the hand, a gesture of grief, for instance in the forsaken Ariadne (§. 388), as in Walther von der Vogelweide 8, 4. Lachmann, that of *æquitas, deformata manus sinistra porrecta palmula*, Appul. *Metam.* xi. p. 775. ed. Oudendorp.

4. See the so-called Germanicus §. 160. R. 4. and the representations of *allocutio* on coins and in statues §. 199, 3. *Manus leviter pandata vorentium* Quintil. in loco. *Διπαρεῖν γυναικομίμοις ὑπτιάσμασιν* Æschyl.

5. On this *σχῆμα ἀνιωμένου* (Paus. x, 31, 2.) [cf. Siebelis p. 272.] R. Rochette M. I. p. 59. 277. 414. comp. Letronne, *Journ. des Sav.* 1829. p. 531. Claspings the hands, besides grief, denotes also a magical fettering, Böttiger *Ilithyia*, s. 38.

6. Aristoph. *Eccles.* 782. on the former gesture in images of the gods. *Χεῖρα ὑπερέχειν* Il. ix, 419. Theogn. 757. Hera *Hypercheiria*, Paus. iii, 13, 6. Thus Apollo and Athena are seen on vases as *ὑπερχεῖριοι* for Orestes.—The pacificator *gestus*, which Statius, S. i, 1, 37. describes in Domitian by *dextra vetat pugnas* (comp. §. 199. R. 4. Schmieder, p. 7.),

Persius iv, 8. by majestas manus, Quintilian in loco (where there is much deserving of attention on the eloquence of the hands) more minutely by: inclinatio in humerum dextrum capite, brachio ab aure protenso, manum infesto pollice (stretched downwards) extendere, is perhaps observable in the equestrian statue of Marcus Aurelius. Visconti M. PioCl. iii. p. 31. R. Rochette M. I. p. 119.

7. On the ἀποσκοπεύειν, the visus umbratus (especially in Satyrs and Pans) Böttiger Archäol. der Malerei, s. 202. Welcker Zeitschr. i, 32. On Zoëga's Abh. s. 257. Appendix to the Tril. s. 141. see below §. 385. R. 4. R. Rochette in the Journ. des Sav. 1837. p. 516., that σκώψ, σκώμενμα as bird and dance (in Eustath. p. 1523 sq.) must be completely distinguished from the dance σκοπός.—Abhandlung von den Fingern, deren Verrichtung und symbolischer Bedeutung. Leipz. 1757. Concrepitare digitis, Satyr at Naples. Mus. Borbon. ii, 21, Sardanapalus.

8. Hence this posture in Providentia, Securitas, Pax Augusta, Lessing Collect. i, 408. Ed. Winck. iv, 368. On crossing the legs in sitting (a sign of dejection, otherwise unseemly) the Same after Fea, s. 366. On the posture of the ἰκέτης Thorlacius de vasculo ant. Havniæ 1826. p. 15.

9. A Trojan ridiculing, with the digitus infamis, his countrymen drawing the wooden horse, Bartoli Ant. sepolcri, t. 16. The sanna with the tongue thrust out (Pers. i, 60.) and the teeth shown (διαμασᾶσθαι) is a principal feature in the gorgoneion. On some gestures of ridicule, Böttiger, Wiener Jahrb. xlix. Anz. s. 7. Gysar, Rh. Mus. für Phil. ii, 1. s. 42. On the pantomime of ancient comedy, T. Baden, Jahn's Jahrb. Suppl. i, 3. s. 447. The comparison of the gesticular language of the modern Neapolitans in Jorio's Mimica degli ant. investigata nel gestire Napoletano. N. 1832. [with 12 plates] is interesting; the coincidences however are not in detail very important. I would explain the gesture on the vase in Millingen Cogh. 19. from the putting on fillets. Comp. §. 344.

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## B. DRAPERY.

### 1. GENERAL PRINCIPLES.

336. That the human body, immediately placed before us, 1 has become the chief form of the plastic art, needs in reality no explanation; it is the natural body, and not some appendage superadded by human customs and regulations, that sensibly and visibly represents mind and life to our eyes. However, there was a tendency in the Hellenic mind, which 2 prompted to press forward to that point where the natural limbs appear as the noblest costume of man; this feeling was fostered in an especial manner by gymnastics, to whose higher aims all inconvenient shame was early sacrificed. The forma- 3 tive art followed in its train, while the costume of the stage, originating in Dionysian pompal processions, struck into the

directly opposite path; hence we must never entertain the idea that stage figures were immediately taken from plastic forms, or the reverse. Nevertheless, however widespread the feeling and enthusiasm for corporeal beauty were in themselves, and however much the artists sought opportunity for such representation, yet this opportunity was seldom arbitrarily brought about, and the artist deviated little from life, whose particular customs and regulations required consideration in the production of artistic forms. Nakedness presented itself as natural in all gymnastic and athletic figures; from these it was easily transferred to the statues of male deities, which had been very elegantly and copiously draped by the piety of earlier times, and to heroes whom elder art exhibited in complete armour; for here the noblest seemed to be the most natural representation. Under-garments, which conceal the form most, were here universally discarded, which answered the more readily as it was the custom, among the early Greeks, for men of healthy and vigorous frame to go abroad in their upper dress without chiton: hence gods and heroes in chitons are extremely seldom to be found in perfected Greek art. But the upper garment is laid aside in art as well as ordinary life, during any animated action or work; standing figures of gods who were conceived as approaching with aid, fighting, or otherwise active, might therefore appear entirely without drapery. In sedent statues, on the other hand, the upper garment is seldom laid aside; it is then usually drawn around the loins; it denotes therefore rest and absence of exertion. In this way the drapery, even in ideal figures, is significant, and becomes an expressive attribute. Ancient art, at the same time, loved a compendious and allusive treatment; the helmet denotes the whole armour, a piece of the chlamys the entire dress of the ephebos. It was customary at all times to represent children naked: on the other hand, the unrobing of the developed female body was long unheard of in art, and when this practice was introduced (§. 125. R. 3. 127. R. 4.) it required at first a connexion with life; here the idea of the bath constantly presented itself, until the eyes became accustomed to adopt the representation even without this justification. The portrait statue retained the costume of life, if it also was not raised above the common necessity, by the form being rendered heroic or divine.

1. This paragraph deals with the same subject as Hirt's treatise "Ueber die Bildung des Nackten bei den Alten" Schriften der Berl. Akad. 1820; but attempts to solve the problem differently.

2. Complete nakedness was first introduced in the gymnastic exercises in Crete and Lacedæmon. In the 15th Olympiad Orsippus of Megara lost his girdle by accident in the stadium at Olympia, and thereby became

the victor. Acanthus of Lacedæmon now appeared at the very outset naked in the Diaulos, and for the runners it became a law from that time. But in the case of other athletes perfect nudity was not introduced till shortly before Thucydides. See Böckh C. I. i. p. 554. Among the barbarians, especially of Asia, the girdle remained; there it was even disgraceful for men to be seen naked (Herod. i, 10.); of which traces are still to be seen in the figures of the gods on the imperial coins of Asia Minor, which have for the most part more drapery than the Grecian.

3. The stage costume took its origin, as Pollux and the PioClementian mosaic show, from the particoloured coats (*ποικίλοι* comp. Welcker ad Theogn. p. lxxxix.) of the Dionysian processions; according to which Dionysus himself, in the ordinary popular notion, could not well be imagined without his saffron robe and purple mantle. Among works of art only a number of vase-paintings, especially Apulo-Lucanian, have a theatrical style in the draperies, on account of their reference to Bacchian processions. Comp. Feuerbach Vatic. Apoll. s. 354. f. and §. 345.

5. As in life whoever was merely dressed with the chiton was called *γυμνός*, so art which could not combine the chiton with ideal forms represented him as really *γυμνός*.

7. The draped Charites of Socrates have been often discussed; they were in relief on the wall behind Athene according to Schol. Aristoph. Nub. 771, on the acropolis says Diogenes L. ii, 19, according to some by Socrates. But was this group, which according to Pliny xxxvi, 4, 10. ranked among the best works of sculpture, really produced by the son of Sophroniscus, who surely had scarcely made such progress in art? The Athenians said so to Pausanias, but Pliny evidently knew nothing about it.

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## 2. GRECIAN MALE COSTUME.

337. The Grecian people, in contradistinction to all ancient 1 and modern barbarians, may be characterized as the eminently artistic nation from the very chasteness and noble simplicity of their draperies. These were all divided into *ἐνδύματα*, those that were drawn over, and *ἐπιβλήματα*, those that were thrown round the body. The male CHITON was a woollen 2 shirt originally without sleeves; only that of Ionia, which was also worn in Athens before the time of the Peloponnesian war, was of linen, long and in many folds; it formed the transition to the Lydian draperies which belonged to the Dionysian festal pomps. Different ranks had the chiton of dif- 3 ferent fashion; but it received its character chiefly from the method of girding. The HIMATION was a large square gar- 4 ment, generally drawn round from the left arm which held it fast, across the back, and then over the right arm, or else through beneath it towards the left arm. The good breeding 5 of the free-born, and the manifold characters of life were re-

6 cognised, still more than in the girding of the chiton, by the mode of wearing the himation. Essentially different from both these articles of dress was the CHLAMYS, also called the Thessalian wings, the national costume of the Illyrian and neighbouring North, which was adopted in Greece especially by horsemen and ephebi. It was a mantle fastened on the right shoulder with a buckle or clasp (περόνη, πόρπη), and falling down along the thigh in two lengthened skirts, often richly and splendidly embroidered with gold and silver.

1. Chief sources on ancient costume: Pollux iv. vii.; Varro de L. L. v. Nonius de vestimentis. Modern treatises: Octav. Ferrarius and Rubenius de re vestiaria (Thes. Ant. Rom. vi.) and Riccius de veterum vestibus reliquoque corporis ornatu (without much reference to art). Montfaucon Ant. expl. iii, 1. (a collection without correct principles), Winck. W. v, 1 ff. Böttiger has rendered valuable services (Vasengemälde; Raubder Cassandra; Furienmaske; Archäologie der Mahlerei, s. 210 ff.; Sabina). Mongez, sur les vêtements des anciens, Mém. de l'Institut Roy. iv f. Clarac, Musée de sculpt. ii. p. 49. The works on costume by Dandré Bardon, Costume des anc. peuples. P. 1772. 3 vols. 4to., Lens, Le costume de plus. peuples de l'antiqu. Liège 1776. 4to. (In German by Martini. 1784), Rocheeggiani, Raccolta di costumi. R. 1804. f. 2 vols. obl. fo., Malliot, Rech. sur les costumes des anc. peuples publ. par. Martin. P. 1804. 3. vols. 4to., Willemin, Rob. von Spalart, Dom. Pronti, are all unworthy of confidence, and little calculated for scientific objects. Male costume Becker's Gallus ii. s. 77.

2. Historical details on the Ionic chiton, the present author's Minerva Pol. p. 41. The Lydian chiton ποδήρης is the βασσάρα according to Pollux, comp. §. 383. Βασσάραι of the Thracian Bacchæ ποικίλοι καὶ ποδήρεις. Bekker Anecd. p. 222. [The Ionians are ἐλκίχιτωνες in the battle on the frieze from Xanthos §. 128.\*] The Pythian stola resembled much the Dionysian costume; doubtless Asiatic musicians, such as Olympus, influenced the perfecting of this garb. To it belong, among others, the χειρίδες, sleeves, with the border-stripe, ὄχθοιβος (Etym. M. ἐγκόμβωμα. C. I. 150). The chiton (kethoneth) of the Hebrews, Phœnicians and Carthaginians was also long and provided with sleeves, Herodian v, 5. Plaut. Pœnul. v, 2, 15. 5, 19, 24., comp. Tertull. de pall. 1.

3. The chiton of the priests was ὀρθοστάδιος, ungirded. The exomis, worn by artisans, while it supplied at the same time the place of the himation (Etym. M. Hesych.) left the right shoulder with the arm free (§. 366.) So did the chiton of the slaves ἑτερομάσχαλος. Its opposite was the ἀμφιμάσχαλος, which kept the body warm (Aristoph. Knights 882). In Gellius vii, 12. the exomis is opposed to the χιτῶν χειριδωτός. The tyrant Aristodemus of Cumæ compelled τὰς θελείας περιτρόχαλα κείρεσθαι καὶ φορεῖν ἐφηβικὰς χλαμύδας καὶ τῶν ἀνακίων χιτωνίσκων. Plut. de mul. virtut. ΞΕΝΟΚΡΙΤΗ, p. 366, ed. Hutten. The short military chiton, reaching to the middle of the thigh, of linen, is the κυπασσίς (Pollux); it is often met with on vase paintings, but also elsewhere, for instance in the Æginetan statues, on the stele of Aristion at Athens, on a metope from Selinunte, on the Xanthian monument §. 90.\* It occurs in Alcæus.]

Ξυστίς was a long, parti-coloured, striped chiton, richly adorned, see Schneider ad Plat. RP. i. p. 335. Schöne, De pers. in Eurip. Bacchabus, p. 41. The διφθέρα of dressed hide, the σισύρα of goat-skin, the βαίτη of similar material, the κατωνάκη with the eke or joint-piece of skin, are peasants or shepherds' apparel, comp. §. 418. R. 3. 427.—The *cinctura* of the tunica, without *latus clavus*, is defined by Quintil. xi, 3. so far as that it reached in front somewhat over the knee, and behind ad *medios poplites*; nam *infra mulierum est, supra centurionum*. The Greeks thought exactly in this manner. The boy *cincticulo præcintus*—apud magistrum. Plaut. Bacch. iii, 3, 28.

4. The *ιμάτιον, ιμάτιον Ἑλληνικόν* (Lucian de merc. cond. 25.), *pallium Græcanicum* (Suet. Dom. 4.), is called in contradistinction to the *toga τετράγωνον, quadratum*. See esp. Athen. v. p. 213 b., comp. the Ed. Winck. v. s. 342. The short coarse *τρίβωνες, τριβώνια, βραχεῖαι ἀνωβολαί* of the Spartans (Amalth. iii, 37), the poorer class of Athenians, Laconizing Greeks, and philosophers (Jacobs ad Philostr. Imagg. i, 16. p. 304); and the *chlæna*, which was a kind of *himation*, also four-cornered (see Dor. ii. p. 283. and Schol. Il. ii, 183.), but particularly soft, woolly and warm. The *χλαυῖς* was still more delicate. The Persian *καυνάκη* was likewise, according to Aristoph., a sort of *chlæna*. The Punic *pallium* was also quadrangular, but was fastened around the shoulders by a *fibula* (Tertull. de pall. 1.); the same garment is to be seen on Babylonian cylinders. At home the *pallium*, on a journey the *chlamys*, Plautus Mercat. v, 2, 70 sq. together with *zona, machæra ampulla*, cf. Pseud. ii, 4, 26. Pers. i, 3, 77. the parasite uses *ampullam, strigilem, scaphium, soccos, pallium, marsupium*, Pers. i, 3, 44.

5. The Greeks *ἀμπισχνοῦνται ἐπὶ δεξιᾷ*, that is, in the manner described in the text, the Thracians *ἐπ' ἀριστερᾷ*, Arist. Birds 1568. with the schol. The latter is also said of the parasites, see Beck in loco. *Ἀναβάλλεσθαι ἐπιδέξια ἐλευθερίως* Plat. Theæt. p. 165 e. Athen. i. p. 21. Here the garment must have reached at least to the knee; this belongs to the *εὐσχημοσύνη* of the *ἀναβολή*, regarding which see especially Böttiger Arch. der Mahlerei, s. 211. Vasengemählde i, 2. s. 52 ff. Only in rapid motion is it tucked higher up (*pallium in collum conijcere*, Plaut. Capt. iv, 1, 12.). On the Dorian and also early Roman custom of *cohibere brachia* in young men (the mantle figures of vase-paintings) see also Dor. ii. p. 285., comp. Suid. s. v. *ἔφηβος*. On Orators §. 103. R. 3. [The Italian and Spaniard also lay great stress on the proper mode of managing the cloak.]

6. On the origin of the *chlamys*, *ἄλληξ, allicula*, Dor. ii. p. 283. Boissonade ad Philostr. Her. p. 381. One of its appurtenances is the *περόνη*, *fibula*, with one or two points or needles (*δίβολος*, Anth. Pal. vi, 282). Strictly speaking, *περόνη* is the needle itself, *πόρπη* the ring, which together form the clasp. When the *περόνη* is loosened, it naturally falls altogether around the left arm, as it is so often seen in *Hermes* (§. 381.) It can also serve as a shield to the arm; thus *Poseidon* on ancient coins (§. 355.) *chlamyde clupeat brachium* (Pacuvius. comp. Cæsar B. G. i, 75). In this manner hunters wore the *ἐφαπτίς* on the stage, according to Pollux iv, 18, 116., comp. v, 3, 18.; this hunting garb is also found in vase-paintings.

- 1 338. Hats did not belong in antiquity to the ordinary costume of life in cities; they denote rural, equestrian, and sometimes warlike occupations; as the *κυνέη*, which had in Bœotia the form of a fir-cone, in Thessalia rather than of an umbrella; the Arcadian hat with its very large flat brim; the petasus, especially worn by horsemen and ephebi with the chlamys, in form of an umbellated flower reversed; the kausia, which had a very broad brim and a very low crown, and belonged to the Macedonian, Ætolian, Illyrian, and also perhaps Thessalian costume. We may also mention the semi-oval sailor's bonnet, to which was given a very significant interpretation in Samothrace; the Phrygian cap also is not unfrequently met with in Greek art, in its simpler as well as more complex form.
- 2 Coverings for the head and feet (which latter, however, in Grecian works of art mostly appear as very simple leathern sandals, *κηπηπῖδες*, when they are indicated at all) most especially determined the varying national costume (*σχῆμα*), to trace the shades of which must be of importance for the more accurate determination of heroic figures.
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1. Comp. on ancient hats Winck. v. s. 40. The *κυνῆ Βοιωτία* is described by Theophr. H. Pl. iii, 9.; Cadmus has it on vases (Millingen Un. Mon. i, 27., comp. the meeting of heroes pl. 18). On that of Thessalia see especially Soph. Œd. Col. 305. Reisig Enarr. p. 68.; it closely resembled the kausia. The *Ἀρχαῖς κυνῆ*, the *πίλος Ἀρχαδικός* was usual at Athens. Philostratus v. Soph. ii, 5, 3.; on the form Schol. Arist. Birds 1203. On the form of the petasus Schneid. Lex. On the kausia, the present author's work on the Macedonians, p. 48, together with Plut. Pyrrh. 11. Polyæn. v, 44. Suidas s. v. *καυσίη*. Jacobs ad Antip. Epigr. Anth. T. viii. p. 294. Scilurus the Scythian has also the kausia on coins of Olbia. It has often an enormous brim, hence Plaut. Trin. iv, 2, 10. *Pol. hic quidem fungino genere est; Illurica facies videtur hominis; this, and the manner in which it is bound at the back of the head, make it very easily known; see especially the coin Æropus iii., Mionn. Suppl. iii. pl. 10, 4. On the vase in Millingen Div. coll. 51. the Thessalian Jason is indicated by the chlamys (comp. Philost. Her. ii, 2.) and a sort of kausia. On a Megarian stele in Stackelb, Gräber Tf. 3, 2. a warrior has a dome-shaped hat [Tydeus and Theseus have the same, Millingen Anc. Mon. Vases pl. 18.]*

2. The dioscuroi as gods of navigation and Cabiri, Odysseus (§. 416), and also Æneas wear the half-oval sailor's cap. It is likewise called *πίλος*, inasmuch as it was of felt like the lining of a helmet, comp. R. Rochette M. I. p. 247. It belongs to the *nauclicus ornatus*, Soph. Philoct. 128. Plaut. Mil. iv, 4, 41., who reckons as part of it a dark brown kausia (in the more extended sense) and the *exomis* of similar colour. On the Phrygian cap in connexion with the Persian penon (comp. §. 246. R. 5) Böttiger, Vasengemählde iii, 8. Amalthea i. s. 169. Kunstmyth. s. 47.

3. The bare feet of the Greeks (Voss, Mythol. Br. i, 21) forms in art a striking contrast with the Etruscan richness in elegant shoe-work.



See Winck. v. s. 41. 81. Athen. xii. p. 543 sq. of Parrhasius: χρυσοῖς ἀνασπαστοῖς ἐπέσφιγγε τῶν βλαυτῶν τοὺς ἀναγωγέας.

4. Τρόπος τῆς στολῆς Δώριος (comp. §. 337. R. 4) is mentioned in connexion with ἀρχμὸς τῆς κόμης, long hair hanging down in disorder (Σπαρτιοχαῖται, Dor. ii. p. 287.), Philostr. Imagg. ii, 24. Α φαῖος τρίβων and the ἀνυποδησία are ibid. i, 16 (in Dædalus) reckoned as belonging to the σχῆμα Ἀττικίζον, comp. ii, 31. On the Macedonian and Thessalian garb §. 337, 6. 338, 1. To the Ætolian belong, according to the costume of Ætolia herself, (§. 405. R. 1.) high shoes, similar to the Κρητικά πέδιλα, the kausia, a high-girded exomis, and a chlamys gathered round the left arm (ἐφαπτίς §. 337). According to the vase, Millingen Div. coll. 33., narrow chitons of skins appear to have been common there. The Thessalian, as well as the Armenian costume, a chiton reaching far down, which is called in tragedy the Ætolian, a girdle around the breast, and an ἐφαπτίς which tragedy likewise adopts. Strabo xi. p. 530.

### 3. FEMALE COSTUME.

339. Among the CHITONS of the women, the DORIC and 1  
 IONIC are easily distinguished. The *former*, the old Hellenic, consisted of a piece of woollen cloth, not very large, without sleeves and fastened on the shoulders by clasps, usually sewed together on the left side in the middle, but left open downwards according to the genuine Doric custom (as σχιστὸς χιτῶν), so that both skirts (πτέρυγες) either met and were held together by points, or else fell apart and were pinned up for freer 2  
 movement. The *latter*, on the contrary, which the Ionians 2 received from the Carians, and the Athenians again borrowed from them, was of linen, all sewed, provided with sleeves (κόρραι), very long and in many folds. Both are frequent in works of art and easily recognised. In both, for the ordinary 3  
 costume, the girdle (ζώνη) is essential; it lies around the loins, and by the gathering up of the garment forms the κόλπος. It is perhaps to be distinguished from the breast- 4  
 belt, which was usually worn under the dress, but sometimes also above it, as well as from the broader girdle under the breast (ζωστήρ) which is met with particularly in warlike forms. The DOUBLE CHITON arises most simply, when the upper 4  
 portion of the stuff which is to form the chiton is folded over, so that this fold with its border reaches down beneath the bosom and towards the hips, where, in works of early Greek art, it usually forms a parallel arch with the κόλπος before 5  
 mentioned. As the cloth reaches further down on the left 5 side than on the right, a portion here hangs over in folds (ἀπόπτρυγμα), which was regarded as a principal ornament of Grecian female costume: it was formed as ornately and regu-

larly by early art, as it was gracefully and agreeably by art in its highest development.

1. Female costume, Becker's Gallus i. s. 318. On the difference of the two chitons, Böttiger Raub der Cassandra, s. 60. The author's *Æginetica*, p. 72. Dor. ii. p. 280 sq. The Doric is frequently found in art (Schol. ad Clem. p. 129), in Artemis, Nike, Hebe, Iris (of the Parthenon), and the Mænads. The Spartan virgins, as distinguished from wives, were usually *μονοχιτώνες* (Dor. ii. p. 282., also Plut. Pyrrh. 17), and in this light dress served as cupbearers (Pythæn. &c. *ibid.*); Hebe was formed after them. Therefore also were the statues of Cleino the cupbearer at Alexandria (Athen. x. p. 425) *μονοχιτώνες, ῥυτὸν κρατοῦντες ἐν ταῖς χερσίν.*

2. The Ionic costume is seen especially in the muses; it does not appear altogether pure in the Attic virgins of the Parthenon; these have mostly half-sleeves with clasps (comp. *Ælian* V. H. i, 18). The *χιτῶν στολιδωτὸς* has a puckered border, flounces; *σύρμα, συρτὸς* is the tragic dress of stage queens, with the *παράπηχυ*, projecting sleeves of a different colour, and trains which were variously adorned in antiquity, especially with gold spangles.

3. *Ζώνη*, and *περίζωμα, περιζώστρα*, Pollux. On *ζώνην λῦσαι* Schrader ad Musæus v. 272. The large *κόλπος* is in Homer characteristic of Asiatic women (*βαθύκολποι*), afterwards of the Ionic costume. The girdle round the bosom is called *ἀπόδεσμος, μαστόδετα, μίτρα, μηλοῦχος, στηθόδεσμος, στρόφος, στρόβος, στρόφιον, ταινία, ταινίδιον*, mostly in the Anthology, comp. *Æsch.* Seven, 853. *Ἰκετ.* 460 with Stanley and Schütz. The *κεστός*, the embroidered, is also a ribbon for the bosom, Anth. Pal. vi, 88. comp. §. 377. R. 5.; Winck. v. s. 24. confounds it with the zone. *Æsch.* Sept. c. Theb. 571. *ὄσαι στρόφον περιβάλλονται.*

4. This costume is found in the sculptures of the Parthenon, but it is seen in greatest beauty in the torso of Ceos, Bröndsted Voy. i. pl. 9., then [in the Ceres Borghese No. 3. in Bouillon Musée des Ant. No. 6.], in the five maidens among the Herculanean bronzes, one of whom is in the act of putting on the dress, Ant. Erc. vi, 70—76., M. Borb. ii, 4—7., also in the vase-painting, Maisonn. pl. 16, 5. This half upper-chiton is evidently the *ἡμιδιπλοῖδιον, κροκατίδιον* (*κροκατὸν διπλοῦν* C. I. 155. p. 249), *ἔγκυκλον* (*ἔγκυκλον ποικίλον* C. I. *ibid.*), which expressions seem pretty nearly identical in Arist. Eccles. Comp. Böttiger, *Furienmaske*, s. 124. *Wiener Jahrb.* xlix. Anz. s. 4. *Ἐπωρίς* (Eurip. Hec. 558. Athen. xiii. p. 608) seems to be only the skirt of the garment, which was fastened on the shoulder with a fibula. Comp. however Böttiger, *Vasengemählde* i, 2. s. 89. The name of the garment which, in Apollo Pythius, the muses, and the Caryatides of the Erechtheum, merely hangs down on the back, remains in that case undecided.

5. This is evidently the *ἀπόπτυγμα*, which was given as a third article (*ῥυμός*), with two *περόναι* and the *ποδήρης χιτῶν*, to a golden Nike. C. I. 150. p. 235. A finely dressed woman goes *πολλὰ πολλάκις ἐς ὄρθον ὄμμασι σκοπουμένη*, Eurip. Med. 1166. cf. Bacch. 895 sq. (935). Sappho *ἔλκην ἐπὶ σφυρῶν*.—The inscription quoted C. I. 155. is rich in names for female apparel. In respect of colour, it appears that garments were here *πυρ-*

γῶτοι (perhaps striped, comp. Athen. v. p. 196 e.), also with particoloured borders, πλατυαλουργεῖς, περιποικίλοι, both of which are very frequent on vase-paintings. Ἐμ πλαίσιω refer perhaps to the scutulatus textus in Pliny.

340. The himation of women (ἱμάτιον γυναικεῖον) had in 1 general the same form as that worn by men; a common use therefore might have existed. The mode of wearing it likewise followed mostly the same fundamental rule; only the envelopment was generally more complete, and the arrangement of the folds richer. The PEPLOS, which was very much worn 2 in early times, but which in the flourishing period of Athens had gone out of use, and was only to be seen on the tragic stage, is recognised with certainty, in the statues of Pallas in the early style, as a regularly folded, somewhat closely fitting upper garment (§. 96. No. 7.); we see from other works of Greek 3 art where no ægis conceals the upper part, that it was twisted across round the chest, and was there pinned together; it has often also a kind of cape in the manner of the diploïdion. Women, for whom the himation generally speaking was more 4 essential than for maidens, often drew it over the head, although there were also separate veils for the head (φάρειον, καλύπτρα, κρήδεμνον, rica), as well as various kinds of FILLETS (μίτρα, στρόφιον, ἀναδέσμη, vitta) and NETS (κεκρύφαλος, reticulum) for the hair.

1. ἱμάτιον is perhaps less usual than ἐπίβλημα, περίβλημα, and especially ἀμπερόνη, ἀμπερόνιον, hence ἀναπέχονος is synonymous with μονοχίτων. The Herculanean matron §. 199. R. 7. is a model of fine ἀναβολή; but many terracottas even from Greece are still more nobly and brilliantly draped.

3. The figures of the Corinthian relief, §. 96. No. 15. especially, and in particular Pallas, Artemis and the first Charis, are to be compared with one another in order to learn the mode of putting on the peplos. Accordingly, in what is said in the Minerv. Poliad. p. 25 sqq. there are some things that require more accurate determination. The tragic writers seem to employ the word very indefinitely; in Soph. Trach. 921. the peplos is a Doric chiton, and also elsewhere.

4. Here are also to be mentioned the fillets for the forehead and hair, with reference for information to Gerhard, Prodrömus, s. 20 ff. Berlin's Antike Denkm. S. 371 ff. Special dress of a matron κόμας καθεῖσα, Aristoph. Thesm. 841., on the contrary σκάφιον ἀποκεκορμένη 838. Στεφάνη is the metal plate rising high in the middle over the forehead, on the contrary στέφανος denotes the crown equally broad throughout the circumference, as in the Argive Hera §. 120. R. 2. Σφενδόνη is similar in form to the sling, στλεγγίς to the strigil. Ἄμπυξ seems to be rather a metal ring which confines the hair, especially at the back of the head, comp. Böttiger, Vasengemählde ii, 87. Διάδημα is a fillet which is placed among the hair and of equal breadth all round the head; to be seen with especial distinctness on the heads of the Macedonian kings.

Ταινία is usually a broader fillet with two narrower ones at each end, well known from representations of Nike (volans de caelo cum corona et tæniis Ennius ap. Festum) [comp. Welcker Griech. Trag. S. 467. 1582.] as a gymnastic honorary ornament, also as an erotic ornament (Athen. xv. p. 668 d. Welcker Schulzeit. 1831. N. 84), lastly as a decoration of tombs (Cæcilius ap. Fest.), known especially from vase-paintings. Comp. Welcker Ann. d. Inst. 1832. p. 380 sq. The twisted fillet of the athletes and of Hercules consists of several tæniæ of different colours. [ταινία λευκή περι τῷ μετώπῳ, Luc. Navig. 39.] Μίτρα, a piece of fine cloth, generally parti-coloured and twisted round the head, in Dionysus and women, especially hetærae (ἑταίρα διάμετρος, Pollux, picta lupa barbara mitra Juven.). Πόλος appears to be a plain round disc, which encompassed the head, as in the Ephesian Artemis (according to others the modius, Amalth. iii. s. 157); on the contrary,\*the μηνίσκος was rather a round cover as a protection against birds, from which many have derived the *nimbus* (the word in this sense first in Isidore; comp. Schläger dissert. ii. p. 191. Eckhel D. N. viii. p. 503. Augusti Christl. Alterth. s. 197.) of a later period.—To these ornaments for the head may be added the περιδέραια of the neck, the ψέλλια of the arms, called also ὄφεις from their form, σφιγκτήρες (spintheres), χλιδῶνες, the περισκελίδες and ἐπισφύρια (also serpent-formed, Anth. Pal. vi, 206. 207.), the ear-rings ἐνώτια, ἐλλόβια, elenchi, uniones), with which art almost universally adorned the images of female deities, Hall. Encycl. iii, ii. s. 333. and so forth. Th. Bartholinus De armillis veterum 1675., Casp. Bartholinus De inauribus. Scheffer De torquibus, Thes. Ant. Rom. xii, 901.

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#### 4. ROMAN COSTUME.

- 1 341. The Roman national costume, which is only met with in portrait figures and some beings belonging to the Italian belief (as the Lares and Genii), sprang from the same founda-
- 2 tion as the Grecian. The TUNICA was very little different from the chiton, and the toga (τήβεννος) was an Etruscan form of the himation, which gradually received among the Romans an ampler and more solemn, but also a clumsier development. Destined at the beginning for appearance in public life, it lost therewith its significance, and was forced to make way for more convenient Grecian apparel of all kinds (læna, pænula),
- 3 but which have little significance in art. The TOGA was distinguished from the himation by its semicircular shape, and its greater length, which caused its ends to fall on both sides down to the ground in considerable masses (tubulata). The curved sweep of the ampler toga under the right arm was the sinus; a round pad was formed thereon by particular art (for-
- 4 cipibus). To this garb belonged the half-boot, CALCEUS, which
- 5 completely enclosed the foot. It was also in early times the military costume, in which the toga was made fast to the body by the Gabinian girdle; on the other hand the SAGUM,

which resembled the chlamys (together with the sagochlamys), and PALUDAMENTUM were afterwards introduced. It was a female dress, but it only remained so among the lower orders, whilst among the higher ranks a dress similar to the Ionic came in fashion, to which belonged the STOLA, consisting of a tunic with broad border (instita), the PALLA, a kind of upper-tunic, and the AMICULUM, which was often very rich, and also ornamented with fringes, and of which the ricinium was the customary mode among the women of early Rome.

1. For the history of the Roman costume, see the present author's Etrusker i. s. 261; what has been said on the cinctus Gabinus has not been correctly quoted by Thiersch, Berichte der Münchner Akad. i.

2. Statuæ pænulis indutæ are mentioned by Pliny xxxiv, 10. as a novitium inventum; they have not yet been pointed out anywhere with certainty.

3. On the toga, especially Quintil. xi, 3. Tertullian de pallio 1. Ημικύκλιον, Dionys. iii, 61. rotunda, Quint. &c. Bis trium ulnarum toga, Horat. Veteribus nulli sinus, Quint. Macrob. Sat. ii, 9. togam corpori sic applicabat, ut rugas non fortè, sed industria locatas artifex nodus constringeret et sinus ex composito defluens nodum lateris ambi- ret. The broad band, consisting of several stripes, on the upper part of the toga, on numerous statues and busts of the later Roman period, still requires explanation. Amalth. iii. s. 256. Is it the lorum, λῶρος? See Du Cange Lex. Gr. p. 837.

6. A peculiarly Roman method of wearing the amiculum is to be seen in the so-called Pudicitia. M. PioCl. ii, 14. Cap. iii, 44. August. 118. The apron of the servants of magistrates, which is to be seen on Roman monuments, was called *limum*. Tiro in Gellius xii, 3, 3. [Lion Tironiana p. 8.]

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## 5. MILITARY COSTUME.

342. The military costume of the ancients is only met with 1 in any completeness in early Grecian vase-paintings, and in Roman portrait statues (thoracatæ §. 199. R. 3.) and historical reliefs; works of the most flourishing period of Greek art are satisfied with indications. The HELMET was either a leathern 2 cap, but which might also be covered with tin plate (κυνέη, καταϊτυξ, galea), or the large equestrian helmet (κόρυς, κράνος, cassis). Here again we can distinguish the helmet used in the 3 Peloponnesus (the κράνος Κορινθιοειδές), having a visor with eye-holes, which could be raised or lowered at pleasure, and the helmet worn in Attica and elsewhere with a short plate for the forehead (στεφάνη) and side-flaps. The solid BREAST-PLATE, 4 (στάδιος θώραξ) contradistinguished from the ring-hauberk (στρεπτός), and consisting of two metal-plates (γύαλα), of which

the one in front was often very richly ornamented with reliefs, was usually straight below, but in Roman works shaped to the form of the body (a rule however which was by no means universal); above, it was held together by shoulder-plates, and below by a girdle round the loins (*ζώνη*); and it was suitably  
 5 lengthened by leathern stripes (*πτέρυγες*) faced with metal. The  
 GREAVES also (*κνημιῖδες*, *ocreae*), wrought of elastic tin, and which  
 were clasped below by the ankle-ring (*ἐπισφύριον*), were often of  
 6 elegant and careful workmanship. The large BRAZEN SHIELD  
 of the Greeks (*ἀσπίς*, *clypeus*), very clearly distinguished from  
 the quadrangular *scutum* (*θυρεός*) of the Romans, is either en-  
 tirely circular like the Argolic, or provided with indentations  
 for holding lances like the Bœotian shield. The appearance  
 of the Homeric winged targets (*λαισήια πτερόεντα*) has become  
 known to us through vase-paintings, which also plainly show  
 us how the handles (*ὀχάναι*) were placed.

1. The Homeric *φάλοι* (comp. Buttman Lexil. ii. s. 240.) may perhaps be recognised in the little upright plates which are so often to be seen on helmets in vase-paintings. On the parts of the ancient helmet, Olenine Observations sur une note de Millin. Petersb. 1808. On the different kinds of helmets Al. d'Olenine Essai sur le costume et les armes des gladiateurs. St. Petersb. 1834. 4to.

3. The Corinthian helmet is usually found on vase paintings of the old style, for example Millin i, 19, 33., [Gall. Omer. ii, 130.] in the Æginetan statues, the Corinthian Pallas, §. 369. R. 4. Poll. i, 149. *κράνος Βοιωτουργές* by way of distinction, as other portions of armour from other places.

4. Hauberks of elegant workmanship from the tombs of Canosa (Millin); helmets, greaves and other accoutrements with sculptures (§. 311. R. 3.), Neapels Ant. s. 213 ff. M. Borb. iii, 60. [The *γύαλα*, breast and back pieces, are the earlier kind of coat of mail, Paus. x, 26, 2; Böttiger Vasengem. ii. s. 73. Hr. Rittmeister, painter at Baden, has a pair in his remarkable collection of ancient armour.] Ornamented armour of statues, Clarac, Musée, pl. 355. 356.—On *zoma*, *mitra* and *zoster* see esp. Pl. iv, 134. together with Aristarchus; on the *πτέρυγες* Xenoph. de re equ. 12. The arrangement of the whole accoutrements in early times is clearly exhibited especially in vase-paintings, Tischb. i, 4. iv, 20. Millin i, 39.

6. *Λαισ. πτερ.* for example Tischb. iv, 51. Millingen Cogh. 10. [Welcker ad Philostr. p. 323. 756. If the reference of this appendage of the shield to the *λαισήιον* is correct, then Millingen, S. Birch and others are wrong in saying that it is nowhere mentioned. Something different are the covers in Aristoph. Ach. 1136. *τὰ στρώματ' ὧ παῖ δῆσον ἐκ τῆς ἀσπίδος*. Three giants have the *λαισήιον* in the battle in Luynes' Vases, pl. 19., also a trumpeter in Hancarville iv, 33. Paris ed., Theseus in Millingen's Anc. Uned. Mon. i. pl. 19. where it likewise occurs pl. 20 and 21, and in the Peint. de Vases pl. 49, Theseus also in Gerhard, Auserles. Vasengem. Tf. 165. and a warrior fighting against Scythians, ibid. 166.