MIDDLE MINOAN POTTERY FROM KNOSSOS.
BASEMENT WITH MONOLITHIC PILLARS: M.M.I.

MIDDLE MINOAN POTTERY FROM KNOSSOS.
NORTH-WEST PIT: M.M. II.

MIDDLE MINOAN POTTERY FROM KNOSSOS.
BASEMENT WITH MONOLITHIC PILLARS: M. M. I.

MIDDLE MINOAN POTTERY FROM KNOSSOS.
NORTH QUARTER OF CITY: M. M. I.

MIDDLE MINOAN POTTERY FROM KNOSSOS.
CHAMBER BENEATH WEST COURT: M. M. I.

MIDDLE MINOAN POTTERY FROM KNOSSOS.
NORTH-EAST MAGAZINES: M. M. III.

THE MIDDLE MINOAN POTTERY OF KNOSSOS.

[PLATES VII.-XI.]

IN the sketch of the pottery of Knossos that appeared in the *Journal of Hellenic Studies* for 1903, pp. 157-205, it was sought to give a general account of Knossian ceramic development on the basis of such finds as were to hand up to date.

Since then, however, further evidence has been accumulating such as serves to bring into clearer outline particular phases in development. This happens to be specially true of the Middle Period. The object, accordingly, of the present paper, which I undertake by kind permission of Dr. Arthur Evans, is to examine the new ceramic materials in so far as they are illustrative of the successive phases of Middle Minoan ceramic development.

The results of a special examination of the pottery found in Early Minoan deposit up to date are to the effect that the two kinds of ground, respectively light and dark, coexist from the very beginning of the use of paint in Cretan ceramics.¹ Thus it can no longer be a question of the one kind of ground supervening upon the other at any later stage but only the problem of the relation to each other, throughout the course of their collateral development, of two kinds of background which co-exist from the beginning and so co-exist in virtue of a technical principle which is as old as any decorative art. This principle is that any kind of design is itself possible only through a difference in shade between the design and its background. The design, whatever its colour, must appear lighter than its background or darker. And given a certain set of media the difference of dark or light in the background conditions the difference of light or dark in the design. Decoration with one kind of ground may come into greater prominence at certain periods than that with the other, but as a matter of design in its widest aspects both kinds of ground will always be found in course of time to emerge into co-existent use to some degree, because the architectonic alternation of light and dark grounds is a primary necessity in the development of decorative art.

¹ See *B.S.A.* x. 21, 22, 26.

From this point of view the Early Minoan Age may be regarded as the era of the genesis of colour-technique itself and the two kinds of design emerge alongside of each other and develop into their simplest difference from each other, as monochrome design respectively on a light and on a dark ground. The time of fusion which marks the first transition to polychrome effects of style has not yet come and there is as yet no true synthesis of light on dark with dark on light such as later formed the true achievement of Minoan decorative art. When we come to the great days of the Middle Period we see that the highest decorative synthesis is one in which light and dark grounds alternate regularly with each other.

Before we enter at all on any discussion of Middle Minoan Ceramics we must bear steadily in mind one result of a careful examination of Early Minoan wares, which is to the following effect:—There is no difference of style corresponding to the difference between light and dark grounds, for the style of ornament in any given phase of development is the same whether on a light or on a dark ground.

This primary unity of style which is indifferently of the same simple geometric character, whether it develops in the medium of light or of dark grounds, is a traditional survival into the Middle Period on which every later phase of development is founded.

1. In the early part of the Middle Minoan Age the elements of ornament are found to be still largely derived from the repertory of the previous era, and like these they are prevailingly geometric in character. Alongside of these, however, other elements begin to emerge which are indicative of a new tendency, that towards curvilinear variation in the designs. This double fact of partial identity with and difference from the prevailing manner of the earlier period as a whole becomes clear at once if we glance at Pl. VII. The fragments were found in the Basement with Monolithic Pillars, *B.S.A.* ix. 18, Fig. 7, in the same deposit in which in 1900 was found the Dove-Vase, *J.H.S.* xxi. 79, Fig. 1, which accordingly also belongs to the early part of the Middle Minoan Age. The deposit underlay the floor-deposits with fine polychrome ware, to which belong the fragments in *J.H.S.* xxiii. Pl. VII., as also the fine cup, *ib.* Pl. VI. 4.²

Here many of the fragments present hardly more than adaptations of a geometric repertory that itself goes back to Neolithic times, and has survived continuously throughout the Early Minoan Age. In this connexion fragments 1–5 and 14–16 are particularly instructive. There is not a combination here that does not repeat well-known Neolithic motives; for example, the sets of parallel bands forming zigzag angles in No. 1, the triangles filled out with white in imitation of Neolithic white-filled punctuations in Nos. 3 and 4.

It is important to note that next to the dull cream-white the colour that most prevails in these early polychrome fragments is a red pigment that varies between vermilion and terracotta, and which is itself an element in

² Our Pls. VII. and VIII., like Pls. V., VI., VII. in *J.H.S.* xxiii., are after drawings by Mr. Halvor Bagge.

colour-design that is seen already, if sparingly, in use in the Neolithic Age. In the Early Minoan Period it is seen as a rare variant for white in light-on-dark design in deposits of the same era as that of Hagios Onouphrios. Fragment 2 shows us this red combined in one scheme with white in a geometric design that is itself of Neolithic origin. The geometric motives in the same colour in 3, 4, and 5 are equally primitive in manner and in origin. The orange variants in 7, 8, 11, 12-15, 17, 18, with their growing tendency towards a purer yellow are later in origin than the primitive reds with which they are seen here in contemporaneous use. The earlier elements in the colour repertory are not superseded by their later variants and rivals, but tend to survive alongside of these. And the variants derive their interest in the design from the differences of tone they introduce in colour-schemes whose polychrome character is essentially the outcome of a natural combination of later with earlier elements of colour. When once a colour has come into use it tends to survive in all combinations in which it has ever formed an element. The elements only die out with the disintegration of the polychrome combinations themselves of which they have formed a part, and this itself is but an organic process in which the process of the integration of the colour-elements is reversed.

In the process of combination of later with earlier elements of colour with which we have here to do, it is curious to note that the elements of geometric design that preserve the earlier Neolithic traditions are apt to survive in their original colours. Thus, for example, the simple Neolithic motive of fragment 1, the dotted triangular fields of fragments 3 and 4, and the lattices of fragments 4, 7, 11 are all elements from the Neolithic repertory that have survived continuously in their original white. The early motives in red and black present us with a similar story of survival. Thus red next to white tends to reproduce in their original character the greatest number of motives from the Neolithic repertory of ornament as seen, for example, in the red parts of fragments 3 and 4. Black-glaze design in its original genesis has involved a transformation, in its development of light grounds, which tends to reproduce the geometric elements of ornament in a guise which is more frankly Early Minoan. In this case, even when the motives themselves are actually Neolithic, the treatment of them tends towards a freedom in which the rigidity of Neolithic tradition is seen in process of gradual disintegration through translation into media which, in their colour-effect of dark design on a light ground, were a transformation into the opposites of what they were in Neolithic technique.

The beginnings of curvilinear design, as compared with the geometric tradition, represent a recent element which is entirely lacking in the Neolithic Era, and which so far has only been observed in Early Minoan deposit of the maturest period. In the beginnings of the Middle Minoan Period the use of simple curvilinear motives appears already to have become traditional, though in strict subordination to the still dominant geometric style. Among these curvilinear motives the wavy bands in dull cream-white, in fragments 5 and 19, form a very early element in design, and there

are analogies for it in the pottery of Egypt of the prehistoric age.³ The cable chain of fragment 20 appears advanced in comparison, and yet it occurs on geometric pottery from Gourniá belonging to the close of the Early Minoan Age.

From the point of view of polychrome development, however, in its relation to traditional survival the most interesting fragments are Nos. 17 and 18 from the neck and shoulder of jug-vases of the same shape as those from Knossos in the *B.S.A.* ix. 95 Fig. 65, *p*, and 97 Fig. 66, *b, d, f, q*. The decoration on the neck is the same for our fragments and for the vases, that is, sets of parallel rim- and neck-bands in a lustrous brown-to-black glaze on a highly polished buff clay slip on terracotta red clay, hand-made. But, instead of the plain dark-on-light 'butterfly' motive on the body of the vases, our fragments have the elaborate light-on-dark polychrome geometric design illustrated in the plate.⁴ Another similar fragment from Knossos, Pl. IX. 6, shows for the body a conservative style of light-on-dark polychrome geometric decoration with a traditional survival of time-honoured Neolithic and Early Minoan motives closely approaching that on fragments 3 and 4. At first sight it might seem as if the vases represented by the fragments with the polychrome design on the body must necessarily be later in date than the plain vases with the simple dark-on-light 'butterfly' motive and that our fragments represented the process by which light-on-dark polychrome design gradually displaced the simple dark-on-light. That this is not so becomes clear on consideration of the fragments shown in Pl. IX. 1-5, which are from the same deposit as the fragments on Pl. VII. The second fragment here is the neck and shoulder of a vase with 'butterfly' motive dark-on-light which in its lustrous brown-to-black glaze, polished buff clay slip, and terracotta clay, is exactly similar to the polychrome fragments. With the Dove-Vase again came out the interesting fragment of a jug with polychrome body of Pl. IX. 6 referred to above as of one class with Pl. VII. 17, 18. It was only in 1903, however, on complete excavation of the Basement with Monolithic Pillars, with the discovery of the floor-deposit with the ware of Pl. VII. underlying a later floor with fine polychrome M. M. II. pottery, that the true context to which belongs the ware of Pl. VII. was realized. Then also the complete similarity between Pl. VII. 17, 18 and Pl. IX. 6 made it clear that this fragment and with it the Dove-Vase from the trial-pit of 1900 really belonged to the same deposit and so to the same M. M. I. context as the ware on Pl. VII. The vases represented by our fragments as well as the Dove-Vase are, however, besides so similar in clay, glaze, and general technique, as to have been probably from the

³ The spiral repeated as a unit but not as a chain also occurs in the prehistoric pottery of Egypt and it is possible that it is from here it drifted into the Aegean. It recurs in the early geometric pottery of Palaikastro and Gourniá. The chain of connected spirals occurs apparently first in the Aegean at some time early in the

Middle Minoan Age.

⁴ The M. M. I. 'butterfly' motive itself is the direct descendant of the hatched triangles in pairs joined at the apex so common in the previous Third Early Minoan Period. See *B.S.A.* x. 198 and 199, Fig. 2, *d, i*.

same workshop, if not by the same hand. And this again would only show that the same potter worked simultaneously in light and in dark grounds.

The interesting and curious set of fragments fitted together as No. 3 on Pl. IX. belonging to a jug like No. 2 but larger, from the same deposit and probably also from the same workshop, with similar lustrous dark glaze design on a polished buff clay slip and clay, may of itself serve to show how popular was the light-ground style at the period to which the dark-ground polychrome fragments on Pl. VII. belong, and how far we are from any real transition from the one style to the other. The subject of the design in its naturalistic character is so advanced that were it not for the company in which the fragments occur we should be tempted to assign it to a much later age. To the right appear the heads (in one case the upper part of the body as well) of three Cretan wild goats with curving horns moving in profile to the right.⁵ Behind them also moving to the right is a curious beetle-like creature with tail. The figures of the goats are in silhouette with incised outlines filled in entirely with lustrous black glaze in a manner that recurs in the black-figured style of archaic Greek vase-painting. The 'beetle' is painted in a very free manner without outlines. The glaze, the polished buff clay slip and the clay are exactly like those of the polychrome fragments which combine a dark with a light ground. The painted hatched bands of the two fitted lid-fragments of No. 4 in matt cream-white on a brown glazy surface and the incised hatched bands of fragment 1 seem at first sight much too primitive for such company as No. 3 with the Cretan goats. Yet there is no doubt that they belong to the same context, though on the other hand each of them in a different medium preserves into this period a favourite Early Minoan design which itself has its origin in the Neolithic Age. The survival of such early elements alongside of new factors in the development of design is very characteristic; and fragment 1 has above and apparently also below the incised band a double pair of parallel bands with a meander band between them, in the dull-coloured early matt cream-white, which is a new combination. Here again, if we take fragments 1 and 4 together, we have an illustration of the law already referred to, that the elements of design that preserve the earlier traditions tend to survive in the earlier media. In the Neolithic Age the white pigment is never found disjoined from the incision. This process of disintegration and separation takes place in the Early Minoan Age. But the separated elements do not die out. In accordance with the organic law of survival, each of the elements gets a new lease of life on its own account in a new environment. In the early part of the Middle Minoan Age the examples in question show us such separated elements still surviving each on its own account, and entering into ever new combinations in which each again, in accordance with the primitive law of organic survival,

⁵ Compare the seal impression, *B.S.A.* ix. 20, Fig. 9, for a wild goat with somewhat similar curving horns. Our earlier picture has

already in common with the original seal the profile movement to the right which is so popular in Minoan Art.

continues in the tendency to preserve its own identity in the midst of all the growing diversity of a polychrome age.⁶ The white lattices of Pl. VII. 4, 7, 11 furnish a striking illustration of this tendency.

The principal shapes presupposed by the fragments on Pl. VII. can best be understood by reference to Pl. IX. 6-15. Here the two-handled spouted jugs 13, 14, illustrate the shapes presupposed by the fragments 1-7, 9, 10 on Pl. VII. The cups 9-12 on Pl. IX. give the general shape presupposed by the fragments 11-16 though the latter are of much finer quality. Spout 6 with a light ground presupposes a vase with a polychrome body and dark ground like the fragments 17 and 18 on Pl. VII. The shape of vase presupposed by all these spouts is figured in *B.S.A.* ix. 95, Fig. 65, *p*, Fig. 66, *b, d, k, f, q*.

The vases shown in Pl. IX. 6-15, which are from the same deposit as the fragments on Pl. VII., once more illustrate the general phenomenon, on which we have been insisting, of the complete parallelism in time of light and dark grounds in the Middle as in the Early Minoan Age. Vase 14 here has a dark ground, but vase 13, of similar shape and in precisely similar glaze and clay, has light-on-dark panel bands all on a light ground. This panel arrangement of vase 13 with the light ground dominant is as near a synthesis of alternating light and dark grounds as we ever come to at this early stage of the Middle Minoan Age. The light neck with dark polychrome body presupposed by fragment 1 on the same plate is not a synthesis but a compromise. The fragmentary cup 7 from the same basket looks distinctly advanced for the context in which it occurs. It is decorated with crescents arranged in horizontal rows alternating cream-white and vermilion-red, all on a very lustrous black glaze slip on terracotta-red clay, which is hand-made. The crescent design is the same as that of the cups, *J.H.S.* xxiii. 176, Fig. 3, 1-3. But whereas the crescents in the case of these cups, in accordance with their later character, seem to have been stamped, the crescents on our cup betray certain irregularities in the design which show that they were painted on by hand. The combination of vermilion and white is also an early characteristic.

One of the outstanding features of Middle Minoan ceramics is the large use made of relief-work of different kinds to enhance the richness of the grounds in polychrome decoration through the added play of light and shadow. It is accordingly only an accident that on Pl. VII. we have only one specimen representing this tendency, fragment No. 13. This is part of the rim of a cup probably with a foot, like fragment 16. The cup, which is hand-made, has two parallel orange rim-bands on a lustrous purple-black glaze slip forming a broad rim-band on the inside of the cup on finely sifted dull buff clay. Below the orange rim-bands appears a series of serrated ridges going obliquely up right in very fine buff clay paste which has been laid on over the glaze. From the North Quarter of the City comes a two-handled

⁶ The pyxis found along with the jugs with 'butterfly' motive shown in *B.S.A.* ix. Fig. 65, *b* affords the curious spectacle of a survival into

this period of the original Neolithic white-filled incisions alongside and independently of their differentiated elements.

spouted hole-mouthed jug, which is of great importance in this connexion on account of the context in which it occurred. This vase has its shoulder decorated with an elaborate system of parallel ridges going obliquely down left, then right, then left again on the fine buff surface of the clay. The ridged zone has going along it at intervals groups of three parallel bands going down left then right in herring-bone fashion, in a thin purple-brown semi-lustrous glaze like that which covers the rest of the vase inside and out.⁷ This jug belongs to the same company as the very characteristic series of vases shown in Pl. X. In this connexion has to be mentioned the rich deposit of vases with blistered surfaces 'à la barbotine' found by the Italians at Hagia Triada in the chambers of a building just outside and above an important tholos-tomb with Early Minoan remains.⁸ These vases like the building in which they were found are later than the tholos and its vases, while their special affinities show them to belong to the same early part of the Middle Minoan Period to which we have assigned the series of vases shown in Pl. X. from the North Quarter of the City at Knossos. Thus item 7 here represents a vase which in type and general style of decoration comes very close to the vases of the barbotine style referred to. The sets of oblique parallel panel bands are common to our vase and to many of the barbotine vases of Hagia Triada. On the Early Minoan prototypes of these vases, the panel bands in question are arranged vertically as in *B.S.A.* x. 201, Fig. 3, *b*. The relief-decoration of our vase in the form of knobs is, however, much simpler than the blistered surfaces of the Hagia Triada vases, and the knobs indeed survive into a period when the barbotine style itself was no longer in vogue. This fact of survival comes out very clearly when we find the same motive so copiously used on the characteristic knobbed pithoi of the Third Middle Minoan Period both from Knossos and from Phaestos.⁹ In this connexion Pl. X. vase 1, is of special interest. This jug shows us the knobs combined with the 'trickle' motive in the First Middle Minoan Period in a manner which is intrinsically the same as that illustrated by the knobbed pithoi which themselves again belong to the end of the Middle Minoan Era. The large white dots of items 5 and 7 recur alternately with red and black ones on the blistered ware of Hagia Triada and both in white and more rarely in red and black represent a favourite motive in the Second Middle Minoan Era. The rope-band in incised relief of items 3 and 4 is a very favourite collar motive in the early part of the Middle Minoan Age, but it does not seem to have had any later history,

⁷ *Mon. Ant.* xiv. 699, Fig. 9 shows the fragment of a vase in the same barbotine style as our Pl. VII. 13 and the vase from the North Quarter of the City at Knossos referred to above. The rippled appearance of this particular style suggests an earlier phase in the process of development, which later became stereotyped in the painted rippled surfaces of M. M. III. and L.M.I.

⁸ For this tholos-tomb see *Memorie del r.*

Istituto Lombardo, xxi. 248-252. The tholos-vases, Tav. ix. Figs. 21, 22. The barbotine vases, Tav. vii. Fig. 16. Compare also for Knossos the two cups with blistered surfaces in *J.H.S.* xxiii. 167, Fig. 1, items 5, 6, which appear in a similar M. M. I. context.

⁹ See *B.S.A.* x. 10-12, Fig. 3; XI. 218, note 2; *Acm. Ist. Lomb. loc. cit.* Tav. xi. Fig. 29.

while in origin it can have had no real connexion with the elaborate rope-decoration of the knobbed pithoi of a later time just referred to. The vases of Pl. X. illustrate very well the alternation of light and dark grounds so characteristic of the Middle Period as a whole.

The survival into this era of the tradition of incision apart from its earlier white filling is in itself a very interesting phenomenon, and reference has already been made to the tendency of such surviving elements to persevere in their own identity in the midst of all the change and diversification of phenomena which are so characteristic of the Middle Minoan Age. The extreme of the tendency of such separated elements of decoration to preserve their own identity is well represented, so far as the technique of incision is concerned, by the one-handled jug shown in Pl. X. 8, which has no other ornament than the systems of hatched incised bands on the brown-red surface of the clay. The context to which the vase belongs is shown not only by the characteristics of its companions in the second and third rows below it, but by the recurrence of such knobbed specimens as Nos. 9 and 10 next it, which again are but common variants of the knobbed vases of Pl. X. 1, 7. The vases of Pl. X are all from the same North Quarter of the City.

On Pl. XI. 1-20 are represented vases and fragments of vases found (1905) on an important floor of a house to west of the Palace belonging to the same early part of the Middle Minoan Period as the floor-deposit to which belong the fragments on Pl. VII. Adjacent on the north side was a house with the rich deposits of M. M. II. ware illustrated in the Report, *B.S.A.* x. Fig. 4. This M. M. II. house had cut into the area occupied by the earlier house, obliterating its deposits yet without touching the parts outside its limits to the south occupied by the vases of Pl. XI. 1-20. Several of the types from the floor-deposit of the Basement with Monolithic Pillars recur here and do not call for special remark. The 'fruit-stand' vase, dark-on-light, No. 12, is, however, a new shape for this period at Knossos, and is interesting as representing in an intermediate phase of development the prototype of the tall fruit-stand vases which are so frequent in the immediately following era (M. M. II.).¹⁰ The undulating band which finishes the decoration of the bowl below is frequent, both light and dark, in the Middle Period and recurs as the base-decoration of many vases of the Palace Style in the Late Minoan Age.

Decoratively the most interesting vase from the deposit is the handsome jug Pl. XI. 1, which is reproduced in colour in *B.S.A.* xi. Pl. I. This jug is essentially of the same type as those with the 'butterfly' motive and their polychrome variants though considerably larger in size. The elaborate polychrome design is concentrated on the upper half and particularly on the shoulder of the vase.¹¹ Just below the middle is a broad band in

¹⁰ See Hogarth-Welch, *J.H.S.* xxi. 87, D. 88, Figs. 15, 16; *B.S.A.* ix. 308, Fig. 8.

¹¹ It is possible now to conjecture that this was probably also the case with the polychrome

vases just cited in comparison which are presupposed by the curious fragments shown in Pl. VII. 17, 18 and Pl. IX. 6.

madder-red bordered above and below by a narrow band in matt cream-white. Below this again half-way towards the base a very broad band is 'reserved' in the pale buff ground of the clay. Above and again below the main design is a rather wide vermilion band. On the neck is a collar-band in madder-red bordered above and below by a narrow matt cream-white band. Above this, on neck and rim respectively, is repeated the vermilion band motive of the body of the vase. On the spout is a band in matt cream-white. The top of the handle has narrow oblique bands in matt cream-white, going up right, in imitation of a twisted basket handle. On the shoulder as fundamental element in the main design is a zigzag series of double axe-like figures with the contour in madder-red bordered on either side by a narrow cream-white band, and having the central field filled out with dots in matt cream-white which are reminiscent of the Neolithic white-filled punctuations.¹² The continuous interval between the units in the zigzag series is filled out with a winding meander-band in vermilion. All on a purple-tinted lustrous black glaze slip on terracotta-red clay with red and black sand-like particles in it, hand-made. Height 28 c., base diameter 19 c., shoulder diameter 22 c.

The kind of process of disintegration by which the stiff geometric or quasi-geometric motives of an earlier age were rendered fluent, and in turn induced the tendency to further fluency of curvilinear treatment in detail, is well illustrated by this vase. The double axe-like figures look like imitations of metal or bone inlays, and of course the form and decorative arrangement of such inlays were largely independent of the rigid geometric tradition.¹³ Thus, given the shapes of these and their serial oblique relation to each other, the outcurving ends of one fit in with the incurving sides of another in a way which conditions the curvilinear meander character of the connecting vermilion band, at the same time that this meander seems to condition their oblique relation to each other in a regular alternation of outcurving ends with incurving sides.

The tendency to concentrate the main design on the shoulder, which comes into prominence at this time, is one that grows with the elaboration of the sense of architectonic principles, which themselves in the last instance are conditioned by the inherent forms of vases themselves, these being dependent in their turn on the kind of use to which the vessels are put. The upper part of the vase as it swells outward to the shoulder is by its nature more important than the lower, and its visual prominence naturally marks it out for the

¹² Compare the white punctuations of Pl. VII. items 3 and 4, and of Pl. IX. 6 and, for the continuity in tradition, Early Minoan examples like *B.S.A.* x. 199, Fig. 2, *h*, *j*, and Neolithic originals, such as *J.H.S.* xxiii. Pl. IV. 15-17, 21, 25, 27, 30. The cup, *ib.* Pl. VI. 2, shows the white punctuated band motive of the Neolithic fragments 15, 16 surviving into the M. M. II. Period. The zigzag in white of the alternate bands on this cup looks equally early in origin, and it seems at length to attain

to decorative finality once for all as rim-band to the beautiful cup *ib.* Pl. V. 2. Compare the Neolithic fragments *ib.* Pl. IV. 22, 26, 31. The lines of white punctuations in a single series of these fragments recur in the M. M. I. and II. Periods, as in Pl. VII. 7, 8, 10 and Pl. VIII. 5-8, 11, 18, 20.

¹³ Polychrome double axe-like figures arranged vertically occupy an analogous position on the beautiful M. M. II. bowl shown in *J.H.S.* xxiii. Pl. VI. 3.

main part of the design. Thus in the distribution of space the upper field receives a greater portion of this than the lower, and the dividing line tends to come below the middle rather than above. In this way the inartistic impression which is invariably created by an exact bisection of the field is avoided through the visual subordination of the lower to the upper part.

This architectonic distribution of horizontal zones on a vase may in its origin be the result of influences that are largely adventitious and unintentional in their relation to the aesthetic result. Thus the horizontal zones may very well owe their actual origin to the ease with which horizontal bands are produced on a vessel revolving on a rotating disc in course of decoration if not of actual manufacture. Later, as we know, the use of the wheel must have given a powerful impetus to the use of this kind of zone-decoration; but the wheel as such cannot explain the origin of such design, if this origin is traceable back beyond the first use of the wheel. However the result may have been produced, yet the result itself when once achieved is one that henceforth survives largely in virtue of its aesthetic fitness. It is thus not a little remarkable that this system of decoration now fully inaugurated in this earlier part of the Middle Minoan Age, though in apparent antagonism to the opposing principles of vertical panelling and asymmetrical arrangements that were so current in the great polychrome period, survives henceforth as a guiding principle of ceramic decoration through all the later Minoan periods, and after that into the Classic Age of Greece. This decorative principle has indeed already attained to perfect balance in the beautiful and elegant M. M. II. cup shown in *J.H.S.* xxiii. Pl. V. 2.

If the different sets of vases and fragments of vases described above be taken together, the historical conclusion is possible that they all belong to one period: the earlier part of the Middle Minoan Age (M. M. I.). This is proved partly by their constant occurrence immediately underneath deposits—often floor-deposits—of the Second Middle Minoan Period and sometimes above deposits of the Early Minoan Period *in genere*, partly by the constant occurrence, along with the variants, in all the deposits, of typical vase-forms such as (1) the ring-foot and footless cups with broad band below the rim respectively light-on-dark or dark-on-light; (2) hole-mouthed two-handled spouted jugs dark-on-light and light-on-dark with characteristic geometrico-curvilinear polychrome tendencies; (3) spouted one-handled jugs of the type with 'butterfly' motive and its polychrome variants.

The principal deposits of this period identified up to date are:—

(1) The deposit of the Dove-Vase in the Basement with Monolithic Pillars (1900 and 1903) Pls. VII., IX.

(2) The deposit found in what we are now able to identify as the M. M. I. Well underlying a basement of the East Wing of the Palace to west of the Court of the Spout (1901 and 1902). The series shown in *J.H.S.* xxiii. 167, Fig. 1 is from this well-deposit.

(3) The pit-deposit found in 1903 under the floor of a passage opening northwards off the East Pillar Room. See *B.S.A.* ix. pp. 94–8 and Figs. 55, 56.

(4) The important floor-deposit of houses belonging to the North Quarter of the City of Knossos and affording a clue as to the great expansion of the city in this direction in the early part of the Middle Minoan Age, Pl. X.

(5) The important floor-deposits of a house on the west borders of the West Square of the Palace which contained the vases of Pl. XI. 1-20 (1905).

(6) A set of vases and vase-fragments found (1905) in a pit-repository immediately underlying the floors of the M. M. II. constructions in the north-east region of the Palace in which in 1902 were found the fine polychrome vases *J.H.S.* xxiii. Pl. V. 1, 2, 3; Pl. VI. 1, 2, 3.

All these deposits, with the exception of that of the well, are either floor- or pit-deposits. As such they are indicative of the occurrence of a catastrophe through which they got covered up before they could be removed. As the vase-types are uniform with variants in the different deposits in which they are found, and as the sudden arrest in development indicated by the abandoned floor-deposits is found to be exactly simultaneous in regions so far apart as the Palace and the North Quarter of the City, we can conclude with safety that the catastrophe was a universal one, and that the different deposits simultaneously submerged by it represent the stage in development arrived at in Minoan ceramics at the close of the period which ended with this universal catastrophe.

With the 'reservation' of part of the light buff ground of a vase towards making it serve as a colour-element in polychrome decoration, which is exemplified by the broad horizontal buff band on the lower part of the vase last described, we have an instance at this early period of a technical finesse of ceramic decoration, which from this time onward is destined to play a prominent rôle in the history of Minoan vase-painting. Henceforth throughout the polychrome period the widest use is made of this curious technical device, and in the Late Minoan Age the practice of 'reservation' becomes so wide-spread as at last entirely to supplant the use of light colour on a dark ground. But it is not merely in such simple instances as this band-motive that even in this early part of the Middle Minoan Age the practice of this device is exemplified. We may not call the light-ground necks of the polychrome vases represented by fragments 17 and 18 on Pl. VII., or the light panels alternating with dark ones of Pl. IX. 13, true instances of such 'reservation'; yet in any instance in which the 'reservation' has been consciously designed by the potter to have its special colour-effect as an element in the polychrome scheme, the decorative function of the device is manifest. Fragment 19 on Pl. VII. is indeed in this and in other respects so elaborate in its decorative treatment as to be a surprise in the context in which it occurs. It presents a vertical panel combination of a light with a dark ground in a manner which is no longer a compromise with earlier fashions, as was the case with the style of vase to which belong fragments 17 and 18, but a true synthesis of the two styles. In such a synthesis the dark ground may be dominant or the light, or again the dark and the light parts of the ground in relation to the more linear parts of the polychrome ornament may appear in such balance as themselves to be integral functions in the scheme

of decoration. This kind of synthesis was the highest achievement of the succeeding era.

2. On Pl. VIII. we have a series of polychrome fragments with a light ground from the 'North-West Pit.' In comparison with the earlier series of fragments on Pl. VII. several determinate differences emerge. (1) The geometric elements of design appear subordinate or latent. Curvilinear motives are dominant. (2) The colour-combinations are seen at a higher organic stage of development in relation to light as to dark grounds, whether these occur as separate unities or in synthesis. (3) This synthesis itself presents the highest stage in achievement, and it reflects historically the polychrome palace style of this period, in which light and dark grounds must have appeared in regular synthetic alternation in the finest decorative schemes in the wall-paintings as in the ceramic art of the period.

That we are a considerable way advanced beyond the manner of the earlier period becomes clear by a mere glance at the fragments on Pl. VIII. This advance in style, however, is never at the expense of any violent break with earlier fashions. Thus we need not be surprised to find in the wheel and the latticed circle of fragment 3 a pair of old favourites that have survived continuously from Early Minoan times and are trying to disguise themselves now in the polychrome finery of the day. This has been with only very partial success in the case of the prim-looking latticed circle. It has not really changed colour at all, but has retained its original dark hue alongside of a double in white that is also found putting in a very early appearance in the Middle Period.¹⁴ There is no doubt, however, that the white lattice in itself has an older history and that it is truer to its Neolithic connexions than the black lattice that begins to appear alongside of it in the Early Minoan Age.¹⁵

In the case of the greater number of the fragments on Pl. VIII. it can be said at once that the design is dark on a light ground. In the case of others, as for example, Nos. 4, 11, 17, 18 light and dark grounds are so equally balanced in one complex polychrome design as to be a true synthesis of both kinds of ground. In others again, as 12, 16, the ground as a whole may be regarded as dark with light ground appearing in details as part of the design. The dark ground is also dominant in Nos. 14 and 15, though here again the design itself may be regarded as a wide dark border on a light ground. In any case we have to distinguish between grounds that are light or dark as a whole and those that are light or dark in details. Grounds that are light or dark in detail become themselves intrinsic elements in the design and this new possibility leads to new combinations in the use and distribution of the colour schemes.

Thus, to take light-ground details. In these the light buff intervals alternating with dark ones, as in fragments 4, 12, 16, 17, 18, become *ipso facto* a new colour-element in the design itself. Again, to take dark-ground elements.

¹⁴ For a white latticed circle of this kind at the M. M. I. stage see *B.S.A.* ix. 95, Fig. 65, *q*.

¹⁵ For the lattice motive at the Early Minoan stage see *B.S.A.* x. 198-9, Fig. 2.

In these correspondingly the dark-ground intervals alternating regularly with the light ones become combined with the light design upon them in such a way as to form one of the colour-elements in this design itself. Thus fragments 4, 5, 10, 12, 14, 16, 17, 18, give us combinations of black with two other colours for the design, if in these instances the ground is regarded as light. In fragment 4 we have combinations of three design-colours in synthesis whether the ground is regarded as dark or as light.

In fragments 13 and 17 we have an entirely new finesse in colour-effect. Both have boss-ornament in relief, the highest points of which allow the buff of the clay to appear through in a manner which repeats the high metallic points of light on bronze originals.

Finally the colour-schemes themselves have become richer in their repertory of tones. As the fine creamy buff surfaces with or without slip, polished or unpolished, emerge more and more as an element in the designs, the dull cream pigments tend to transform to a paler white. The vermilion-tinted orange has beside it a paler yellow, the vermilion-tinted reds subordinate themselves to pale pink, terracotta-red, cherry-red, red-brown and purple-brown. Paler or warmer tints of buff clay and variations towards purple-brown or metallic purple-black glaze become consciously sought out in the grounds. The imitation of metallic high lights in relief may appear as points of white colour on dark glaze grounds, whether in the flat or in relief, or sometimes of the pale buff of the clay itself allowed, as in the instances referred to above (fragments 13 and 17), to appear through the lustrous black glaze of the ground. This variety of resource in the use of colour, in combination with the new variety introduced by means of the growing tendency towards curvilinear design, is what distinguishes the ceramic art of this period from the earlier manner illustrated by the fragments on Pl. VII. The great underlying fact that is common to both periods is the phenomenon of the co-existence of light with dark grounds, and this regular co-existence of light with dark grounds has been already traced continuously from the borders of the Neolithic Era through the Early Minoan Period to the time of which we speak. Of this continuous co-existence of light with dark grounds we have an emphatic illustration on Pl. VIII., the fragments on which with a light ground have been on purpose selected out of a context in which light and dark grounds regularly occurred together. We never have a period in which dark grounds appear alone, though on the other hand light grounds never emerge into emphatic predominance until the Late Minoan Age. Yet even at that later time the dark grounds are seen surviving as a subordinate factor and they never altogether die.

The greatest achievement of the Middle Period was undoubtedly the synthesis of the two styles to which reference has been made, and if we knew more of the wall-painting of this era we should probably find that this mature polychrome ceramic style was but one phase of a movement towards the synthesis in decorative art of light and dark grounds, which must have received its highest expression on the walls of the Earlier Palace itself. It is not likely that the alternation of light and dark-ground panels was an

invention of the potter alone, though it may very well have been one in which he shared in one common movement of decorative art in which the wall-painter took the lead. The invention was one that was inevitable when once it was seen that the buff clay could equally with the black glaze become an intrinsic element in polychrome design.

The principal ceramic finds of this period at Knossos identified up to date are :—

(1) The floor-deposits of the 'South-East Kamares Area' or area of the Basement with Monolithic Pillars where this deposit was found (1902) superimposed upon the earlier floor-deposit, to which belongs the pottery of Pls. VII., IX. *J.H.S.* xxiii. Pls. VI. 4, VII. are from this deposit. See *B.S.A.* viii. Pl. I. 'Earlier Palace'; ix. 18, Fig. 7.

(2) The floor-deposits of the 'North-East Kamares Area'—a system of rooms, underlying the ground-floors of the North-east quarter of the Palace, in which (1902) were found the fine polychrome vases *J.H.S.* *ib.* Pls. V., VI. 1, 2, 3. See *B.S.A.* viii. Pl. I. 'Earlier Palace.'

(3) The floor-deposits from the early basements underlying the ground-floors in the area of the Room of the Olive Press. *J.H.S.* *ib.*, Figs. 4, 5 (1902), and *B.S.A.* ix. Pl. II. (1903).

(4) The floor-deposits of the 'North-West Kamares Area' (1901 and 1903) and the 'North-West Pit' (1904). The pottery of our Pl. VIII. is from the latter deposit. See also *B.S.A.* ix. Fig. 75; x. Figs. 5 (1), 6.

(5) The floor-deposits of the Middle Minoan House beneath the West Square (1904), *B.S.A.* x. Figs. 4, 5 (2). This house in the southward direction had partially cut into the pre-existing house to which belong the floor-deposits of Pl. XI. 1–20.

The simultaneous submergence of these floor-deposits was probably the result of a general catastrophe. See *B.S.A.* x. 16.

3. The decline of the polychrome style and the gradual relapse towards simple monochrome design on light and dark grounds is a tendency of the later Middle Minoan Age, which succeeded the general catastrophe referred to above.

The forces which tended to hasten this decline, and simultaneously to inaugurate a new phase in the development of style, have not to be conceived as influences acting from without but as integral moments in a process of disintegration and reconstruction working from within towards which the catastrophe referred to furnished only the occasional cause. This catastrophe did not bring with it the elements of an entirely new style from the outside: it simply acted as a precipitant to a process of development from the inside which was already latently active when the catastrophe came.

The polychrome style in its intrinsic character had grown to its full fruition as the mature outcome of a tendency in which differences of colour were regarded in the light of their decorative effect in their relation to each other. There was no more thought of imitating nature in this tendency than there probably was in the case of the textile fabrics or the decorative parts of the wall-paintings of the period. Colours have harmonies of effect in

relation to each other, quite independently of the juxtapositions in which they are found in nature, and the polychrome art of the Middle Minoan Age is as practical an illustration in point as we have many ages later in the similar principle underlying the polychrome decorative art of Greece. This underlying principle is the same indeed, for that matter, over a much wider field, and is as independent of the mere imitation of nature in a tapestry of Ancient Egypt or a polychrome vase of Crete as in an old Persian carpet or an antique glass of Venice.

Considering the relatively limited scale of colours at the disposal of the Minoan ceramic artist, we have seen this principle of polychrome decoration in the mature period of the Middle Minoan Age reach a high degree of elaboration.

It is just towards the end of this era, however, that we see the beginnings of another tendency coming definitely into play, namely, that towards the portrayal of natural objects. And, as is apt to happen when a growing tendency comes into one sphere of action with one that has already reached full fruition, the new tendency as an evolutionary movement enters into antagonism with the old and strives to oust it from its field of activity. There is no doubt that the new tendency received great impetus through the catastrophe to which reference has been made above, as having occurred at the close of the great 'polychrome' period. After that catastrophe we find polychrome processes in ceramic technique in course of rapid dissolution, while we see the new tendency in full swing, and by the time we again have floor-deposits on a universal scale the new principle is so fully established in ceramic art as almost to have ousted the other.

In decorative wall-painting, on the other hand, the new tendency could effect a reconciliation with the old, for here the growing feeling for nature was able to receive expression for itself only within the limits set by the polychrome principle itself, which in the old-established usage of the time conditioned the general effect of all wall-painting in its decorative function as a whole and in detail.

That it was otherwise in ceramics was the outcome of special conditions and limitations of the art which are absent in the case of wall-painting. (1) Limits of space, which practically do not exist for the decorative wall-painter, tend to compel the vase-painter, in his preoccupation with the portrayal of motives from nature, to substitute such motives for the more purely decorative ones on the more prominent parts of the vase, and to give these so much scope as tend to reduce all decorative free-play to minor details on neck and base. Thus we find these more purely decorative motives surviving just where they are not in the way. The extreme of this tendency is seen in the vases with lily-design from the South-East Magazines shown in *B.S.A.* viii. 90, Fig. 51 (one of which again, *ib.* x. 7, Fig. 1) and *J.H.S.* xxiii. 189, Fig. 8.

(2) Once we have the portrayal of natural objects, such as flowers, which becomes so rife before the close of the Middle Minoan Age, it soon becomes apparent that a scale of colours, which in their relation to each

other were capable of producing polychrome effects of great beauty, was quite inadequate towards the reproduction of the natural colours of objects. Thus green, for example, which is the first necessity towards the rendering of leaves and stems, and which we find in use with the wall-painter, did not exist in the colour-repertory of the vase-painter. The ceramic artist must thus have felt that with his limited scale of colours he could not produce the same natural effects as the wall-painter with his. On the other hand he must have been equally conscious that natural objects such as flowers did not look natural in a polychrome guise which was not that of nature. The only solution of the colour-difficulty in the circumstances was a compromise in the shape of a convention. Thus the tendency came into being to make all natural objects either simply light on a dark ground or dark on a light ground. The beginnings of this process go back to an early period and we have, for example, the Cretan goats of Pl. IX. 3 already appearing as simple black silhouettes on a light ground. Items 1 and 2 on Pl. VIII. show us graceful frond and leaf motives, with polychrome details, used with the fine sense of decorative effect so characteristic of the Second Middle Minoan Period. The fine panel jar from Phaestos again, *Mon. Ant. Linc.* xiv., Pl. XXXV, *a*, shows us an intermediate stage in the process, in which, on a vase that is still polychrome, tall reeds appear on alternate panels monochrome dark on a light ground. The twisted cable pattern in white on the stem, so far removed from nature, only serves to show how much the vase-painter was still under the influence of the decorative traditions of a polychrome style that itself was in process of passing away. The lily-vases referred to above show us the full accomplishment of the process in a monochrome design that is entirely light on a dark ground and yet entirely natural in its treatment of forms.

The finest vases of the Temple Repositories show us the same stage in development. Perhaps the most remarkable example from this series is a two-handled piriform amphora, with plant and flower design light on the usual semi-lustrous purple-black glaze ground. On either side, front and back, in an oval panel is a plant-design with large spreading pointed heart-like leaves. A very freely rendered design of graceful tulip-like flowers on tall sinuous stems is fittingly adapted to suit the narrower interval left below the handles on either side. The free breadth of treatment combined with natural grace that characterizes the decorative style of vases like these was hardly ever again attained to in the ceramic art of a later time, but that the phenomenon was not an isolated one is shown by examples in wall-painting like that of the Crocus Gatherer, and in the art of faience like the crocus panels of the Votive Robes, and the rose- and fern-leaves of the vases in the same material from the Temple Repositories themselves.

(3) In the course of such processes of change any latent weakness inherent in the organic fibre of earlier tradition that is itself in course of dissolution is found all at once to have come rapidly into full view. It has already been suggested that the general catastrophe, which occurred at the beginning of this period, gave a forcible impetus to the processes of change

and after that catastrophe it is equally apparent that the old polychrome decorative technique never again appears at the same high level of achievement as in the previous era. All the polychrome innovations of the finest period vanish with such rapidity after the catastrophe, that we can hardly account for the disappearance except on the hypothesis of a general decline at this time in the methods of polychrome technique itself. A fixity in the durableness of the colour-media, which is only of relative moment to the wall-painter, was something of paramount importance in ceramic art. And any falling off in the technical art of fixing the colours on the body of the vase was in itself sure to lead to a rapid falling off in the regular use of these. Thus it probably is that the oranges, yellows, pinks, and crimsons of the great 'polychrome' era are found so entirely to have vanished, and that in the deposits belonging to the end of the new period we have still represented only the original whites and reds, and alongside of these the fundamental dark of the glaze and buff of the clay.

This double fact respectively of the disappearance of the more recent elements and endurance of the earlier functions in the repertory of colours is itself a curious phenomenon of survival. The elements from the old colour repertory that survived into this period were those that had longest established themselves in continual use. Thus white and red survive continuously till now from the Neolithic Period, while the buff surfaces and black glaze ornament and ground are an equally continuous inheritance from the Early Minoan Age.

Coincident with this survival of earlier elements in colour, at the expense in ceramic art of colour-elements of later origin, is the survival in these colours of certain ornamental motives of earlier origin, at the expense of ornamental motives of later origin in later colours. Thus the spiral, itself of Early Minoan origin, survives till now almost invariably in its original white, and only very rarely in red or black. Similarly the Early Minoan cable-band is still true to its original white, and if it is not that it is sure to be in red or in black.¹⁶ The vase from Phaestos referred to above has going down the dark panels a chain of circles joined by transverse tangents that, in a simplified form, has survived in its original white from the Early Minoan Age.¹⁷ Again the early white and red horizontal bands on the subordinate parts of vases are a commonplace survival into the ornamental repertory of this period.

This coincidence in survival between certain functions of colour and of ornament is one that rests upon the mutual relation in which they appear together from the beginning. Otherwise it is not easy to account for the survival of colours like white or red, that from the point of view of durability have in themselves no distinct advantages over the colours that have vanished from the repertory. Those colours survived with the ornamental motives in

¹⁶ For a red and a black cable pattern of this kind at the M. M. II. stage see the polychrome cups in *J.H.S.* xxiii. Pl. V. 3 and Pl. VI. 4.

¹⁷ Compare the latticed circles joined by transverse bands of the E. M. III. Period in *B.S.A.* x. 199, Fig. 2, items *f*, *k*.

which they traditionally appeared on those parts of a vase, and under those circumstances in which they were not in the way. Thus we have the time-honoured horizontal bands, the spiral chains, and cable-bands on the upper and lower parts of vases, whose main field may be engrossed with the bold innovations of a recent time.

This phenomenon of survival of earlier elements at the expense of later ones is itself, however, a process of disintegration that is at the same time a process of readjustment to new conditions. The earlier elements in colour as in ornament preserve their original characteristics, but once having through disintegration become detached from their traditional environment they are now able to enter into new connexions. Thus, for example, the large spiral band in white on the shoulder of the jar *J.H.S.* xxiii. 177, Fig. 4, is a bold decorative variant for the branch-wreaths of Fig. 5 on the next page. On the Phaestos vase again the old-world chain of circles connected by transverse tangents of Early Minoan origin in white on the dark panels performs the same decorative function as the new-fangled plant motive in black on the alternate panels with a light ground.

Colours, however, as media have a much greater capacity for entering into new combinations than the ornamental motives that survive in them. The traditional conservatism of ornament in its development is one that always tends to persist in its original characteristics, while the colours that have survived as media with the ornament, provided they are true to their original shade, can easily disconnect themselves from the combinations in which they have survived in order to enter into new ones. The large and growing use at this period of white in the rendering of flower and plant forms, at the entire expense of every other colour except the vanishing red and the glaze-black whose use becomes so dominant in the next era, is fully illustrative of this adaptability of a surviving colour-medium towards entering into new combinations. On the vase from Phaestos and its interesting companion we find this vanishing red still appearing, now in the primitive cable pattern, now in graceful blossoms and blossom-sprays.

The tendency is already nascent in vases that are still polychrome, for example the branch-bands of the jar already mentioned (*J.H.S.* xxiii. 178, Fig. 5). At this stage, however, the horizontal arrangement of the white branches as a band still betrays the influence of limits set by polychrome architectonic traditions, and it is only the vertical panel that affords excuse for an arrangement more in accordance with nature. In the vase from Phaestos referred to above we have this panel arrangement, but the reed-motive appearing black on the alternate light panels, the artist has fallen into the curious temptation of further defining his stems, by means of a cable-chain in white going up them which has nothing to do with nature though decoratively it has its full justification in the touch of colour-variety it introduces into the bare black of the stem. Indeed the panel arrangement, alternately light and dark, of this vase has made possible a happy union of time-honoured decorative schemes with the recent motives from the world of plants and flowers which makes us entirely forget questions of origin and

tendency for the sake of the fine polychrome breadth of treatment and architectonic balance of the whole. The equally beautiful companion to this vase (*ibid.* *b*) shows hardly less mastery of architectonic treatment in the decorative subordination of polychrome blossom-sprays and palm-like leaves to a spiral system in white, in an oval panel on a dark ground, whose early connexions are equally forgotten in the fitting grace of the general design. At the end of the Middle Minoan Age, as represented, for example, in the pottery of the Temple Repositories, we have still got the tradition of the alternate vertical panels light and dark and of the oval panels on a dark ground, but the rendering of plants and flowers in white has become so natural as at first sight to seem quite independent of all previous tradition in ornament, and this is true to a still greater degree of the lily-vases already mentioned.

There is, however, a further moment in colour-survival that requires remark. We have seen white surviving with certain ornamental motives, and then detaching itself from its connexion with these and entering into new combinations in the rendering of flower and plant forms. But this is not entirely at the expense of the original connexions. The old connexions are not entirely given up because new ones are formed. The white in its traditional connexion with the spiral, for example, survives alongside of the new combinations in which it appears. The white spiral is of much earlier origin than the white branch, but on the jars referred to above the spiral and the branch in white already appear as decorative variants of each other. At the end of the Middle Minoan Age the white spiral is still popular as the main decoration of a vase, alongside of elaborate decorations in white from nature, as on the outside of the 'candlestick' in *J.H.S.* xxiii. 189, Fig. 8, 2, which occurs in the same context as the beautiful white lilies of the vases *ib.* 7, 10.¹⁸ The black double of the spiral in white (*ib.* 3) comes more and more to the front at a time when the growing monochrome tendency makes simple dark-on-light the one natural alternative to light-on-dark design. In the Temple Repositories, again, the large spiral decoration in white on the pitcher in Fig. 1, *h*, is so effective as to seem little out of place alongside of the natural twigs in white on a dark panel ground which we have in the same series, *d*. In these repositories the spirals in white continue still to be more popular than the similar ones in black, but the same deposit shows us a vase, *f*, in which a white spiral band on a dark ground on the shoulder may be regarded as more than balanced by a black spiral-band on a much wider light ground on the body of the vase.¹⁹

This example, with its spiral systems indifferently light on a dark or dark on a light ground, is of itself sufficient to illustrate at this stage a

¹⁸ For the 'candlestick' see also *B.S.A.* viii. 91, Fig. 51, 2; 92, Fig. 52.

¹⁹ The spirals here appear as black discs joined by pairs of transverse tangents just as as if we had to do with the double in black of the similar motive in white of the panelled

vase from Phaestos referred to in previous passages. Have we not here indeed the original of the spiral chain itself surviving on its own account alongside of that from the Early Minoan Age?

universal law of the development of style in Minoan ceramics. The style of decoration and the repertory of ornament at any given stage in development are the same whether on a light or a dark ground. Beginning with the Early Minoan Age there is never at any stage any real conflict of motives on a light with those on a dark ground, but only of later motives with earlier ones, whether the grounds are light or dark. In the period at which we have now arrived, that conflict took the form of a struggle between the more

FIG. 1.—MIDDLE MINOAN POTTERY FROM KNOSSOS. TEMPLE REPOSITORIES: M. M. III.
(After *B.S.A.* ix. 50, Fig. 26.)

recent tendency towards portrayal of nature, and the earlier motives from the rich traditional repertory of polychrome ornament, which we see in such brilliant bloom in the ceramic art of the previous era. It is not a conflict of styles disparate in historic origin, as if with the light grounds some influence from without had come to be superinduced upon the native influences from within; for the light grounds have been there from the very beginning of the use of paints in ceramics, and the new influences, if anything, are more

marked on the dark grounds than on the light ones, as the lily-vases have taught us. The conflict is one of a later phase of style with an earlier one, whether the grounds are light or dark; and that conflict in its full antithesis was that between an earlier style of polychrome ornament, which has nothing to do with nature though it has its own legitimate function in decorative art, and a later natural style. This later style, in its convention of simple light on dark or dark on light grounds, threatens the legitimate function in ceramic art of a polychrome principle, which under more favourable conditions still continued to play its usual rôle in the wall-painting of the period.

In this conflict it need not be surprising that many time-honoured elements of ornament managed to survive into the new era, in an environment from which the polychrome colour-functions of more recent origin were themselves in rapid process of elimination. This survival of decorative ornament alongside of the growth of natural motives means no real or intrinsic disparateness in style itself, since decorative ornament in its own sphere is as essential to style as truth to nature in its particular province. The unity of style that results, however manifold may be the moments that make it up, is one whether the decoration is light or dark, and if in the next age the light grounds ultimately triumph under particular and partly accidental circumstances, in the natural course of development the style that results is one that emerges out of conditions that previously were common to light as to dark grounds. In the clash of the processes of change, the conservative tendency of tradition in the development of ornament is apt to receive an exaggerated expression of reaction in the work of individuals as of particular schools, just at the moment when the new influences are winning the day; but from this phenomenon to argue to disparateness of origin as regards different phases of style, that may come into simultaneous contrast at the same time that they are successively unfolding themselves into synthetic moments of each other, is to ignore a principle of antithetic movement that is the very life of all development. It is only a particular form of the same fallacy to argue, from the special unity of style that is characteristic of a certain given phase of ceramic art, against the multiplicity of tendency at an earlier stage which has gone to shape that particular unity of style. And a conception of the unity of style which excludes this manifoldness of tendency, simply because we happen not to know all the successive phases in the process of development, is simply an abstraction of our own making.

It is, however, a more serious hindrance to scientific progress when long-established prejudice comes in to darken knowledge. Thus, for example, it has been long assumed after Furtwängler and Loeschke that what it has been usual to call the Mycenaean style in ceramic art was the invention of Achaean or Mycenaean Greeks. It seems labour in vain to insist on the bearing of the Cretan evidence to the effect that the beginnings of the style which is most characteristic of the ceramic art of the Mycenaean Age are found in process of development in the Aegean, at an era preceding by many ages the first appearance of any people of Hellenic race and speech on the mainland of Greece.

The underlying assumption, whether consciously acknowledged or not, is, at bottom, to the effect that the supposed 'Achaean' racial movement which, with reference to the mainland of Greece, is regarded as having originated the Mycenaean Civilization, was an Aryan one from the north. And this assumption has become one of those fixed ideas in archaeology for which it is difficult, by the ordinary normal processes of reasoning, to come to terms with conclusions from actual excavation. Such conclusions make it ever more apparent that the racial movement which resulted in the Aegeo-Mycenaean Civilization was a pre-Aryan one from the south, and that consequently for such a movement the islands became early centres of racial development, which gave them the natural antecedence and precedence in influence over what for such a northward movement was the more outlying littoral of Greece and Italy and Anatolia. The most recent results from mainland Greek centres so far apart as Argos and Orchomenos are quite in harmony with these conclusions. They reveal to us a matt technique in ceramics, which is as wrongly instanced to argue a real disparity of race in the earliest period which preceded all preponderating racial movements from the north, as it is rightly used to strengthen the conclusions as to the outlying tardative character on the continent of a ceramic art whose great progressive centres were in the Aegean world under the growing paramount influence of Crete.

The principal deposits of pottery that up to date have to be assigned to the closing period of the Middle Minoan Age are the following:

(1) A group of vases including one with a graffito inscription found in 1901 in an earlier basement underneath the ground-floors in the south-west region of the Palace. See *B.S.A.* vii. 10-11, Fig. 4.

(2) The ware found in 1901 in the second cist from the west end of Magazine 4 in the West Wing of the Palace. See *ib.* 47, Fig. 14 and *J.H.S.* xxiii. 185, 188, 190. This isolated find in the light of later discoveries has now to be shifted back from the position assigned to it in these citations into the same company as the other groups here enumerated. The two-handled piriform jars of this cist are exactly like those of the Temple Repositories.

(3) The pottery of the North-East Magazines from the excavations of 1901. See *B.S.A. ib.* 72-4, Fig. 24. From this deposit we have to exclude the pottery found along with a steatite vase-stand (see *ib.* 74) outside the existing west wall of the Magazines, all which belonged to a later deposit formed after the Magazines themselves had got covered up.²⁰ The 'trickle' decoration so common on many of the vases from these magazines is very characteristic of the closing period of the Middle Minoan Age, though its origin, as we have seen, goes back to an earlier time. See *ib.* Fig. 24, 'streaked vases in heaps,' and our Pl. XI. 21-23. Into the same context comes the pottery from the floor-deposits of the North-East Hall and adjoining store-closet. In the store-closet was found a pithos with 'trickle'

²⁰ The allocation to Magazine 5 in the passage and Figure cited in the text rests upon an oversight.

decoration and rope pattern like those of the knobbed Pithoi of the East Magazines. There is now conclusive evidence that this whole complex of apartments inclusively of the North-East Hall or Light-well and its staircase as far south as, though probably not including, the corridor going east-west to north of the system to which belongs the Room of the Olive Press, had got covered up before the beginning of the Late Minoan Age. See *B.S.A.* xi. 210.

(4) The ware found in 1902 in the deposits immediately underlying the palace floors in the area of the Room of the Olive Press and superimposed on floor-deposits with pottery of the finest polychrome class in the same area. See *J.H.S.* xxiii. 179, 180 with Fig. 6, 181 and *B.S.A.* x. 6, 8.

(5) The important series of large knobbed pithoi with characteristic 'trickle' decoration found in 1902 in a series of early magazines in the area north of the Court of the Oil Spout in the East Wing of the Palace. See *B.S.A.* viii. 10-11, Fig. 5; x. 10-12, Fig. 3. These magazines, whose foundations were laid deep down, had cut into the south end of the older system with rich floor-deposits of the finest polychrome ware such as that figured *J.H.S.* xxiii. Pls. V. and VI. 1-3. See also *B.S.A.* viii. Pl. I. MNO, 11-12, 'Earlier Palace.' The frequency of the 'trickle' decoration on these pithoi is in chronological harmony with its frequency on the jars of the North-East Magazines (above, group 3).

(6) The series of pithoi and other vases including those with lilies found in 1902 in the South-East Magazines. See *B.S.A.* viii. 91, Fig. 51; *J.H.S.* xxiii. 189, Fig. 8. Later ceramic discoveries justify the withdrawal of this series from the company in which it appears in the above citations and the bringing of it into one context with the groups enumerated here. See *B.S.A.* x. 7, Fig. 1 and, 8, 9, Fig. 2. The two-handled type of tall slender jar with the lilies is essentially the same as that with the 'trickle' decoration of the North-East Magazines. The only difference is that the jars of the North-East Magazines still have their circular hole-spout with lip, whereas this spout in the case of the lily-vases has dwindled to a flat button. This difference in itself, however, does not compel us to put the lily-vases later than the others in date, for, apart from the similar stratification, the continuation of the real spout in those circumstances in which it is of practical use, alongside of the mere ornamental reminiscence of a spout in those other circumstances in which its practical use has disappeared, is one of the commonplaces of ceramic traditional survival. The real spout occurs in the same deposit alongside of still other instances in which external appearances are kept up, though the spout itself when looked into is false, as in the case of some of the pithoi. These two-handled spouted pithoi indeed are probably themselves in origin derived from the two-handled spouted hole-mouthed jug so characteristic of the Middle Minoan Age in general. The mediating type probably was a larger kind of two-handled, hole-mouthed jar like those of *J.H.S.* *ib.* Figs. 4, 5. The spout, which was still of practical use in the case of a medium-sized jar, could only have the function of an ornament for a pithos too large to be tilted or raised from the ground for pouring purposes.

(7) The ware from the deposit in the area of the Basement of the Monolithic Pillars in which in 1902 were found the two vases with inscriptions in ink described *B.S.A.* viii. 107, 108, Fig. 66. This deposit belongs to a stratum superimposed upon that which contained the finest polychrome ware, while adjacent at a higher level were the floor deposits of the Palace. To the same deposit belonged a small pithos with 'trickle' decoration like that of the Knobbed Pithoi and of the jars of the North-East Magazines.

(8) In the 'North-East Kamares Area' ('Earlier Palace'), above the floor-deposits with fine polychrome egg-shell ware, occurred a later stratum, again with clearly marked floor-deposits which contained, among other characteristic pottery, a series of tall slender two-handled jars, lying on their sides, of the same type as the tall graceful jars, with handles below the shoulder, of the cists adjacent to the Temple Repositories, and the other similar jar with graffito inscription from the South-West Basement. See *B.S.A.* *ib.* 117, 118.

(9) The remains of a large knobbed pithos and vases found along with it in the 'Walled Pit No. V.' in the region of the Palace north of the north-west angle of the Central Court (1901 and 1903). See *B.S.A.* ix. 23, Fig. 11, V.; 26, Fig. 13; 27, Fig. 14; x. 10. This knobbed pithos with its 'trickle' decoration was of very similar character to the knobbed Pithoi of the East Magazines.

(10) The important series of vases found in 1903 in the Temple Repositories and in 1904 in the connected system of three cists which run north from the Repositories towards the Antechamber of the Throne-room. See Fig. 1 and *B.S.A.* ix. 48, Fig. 25; 49, 50, Fig. 26; 51; x. 13, 26-34, Pl. I. The vases of the Temple Repositories were rich in naturalistic motives in the shape of plants and flowers, whose fine feeling for style faithfully re-echoed that of the embroidered flowers on the panels and borders of the dresses of the Snake Goddesses from the same deposit. There is further an exact resemblance to the fine style of the lily-vases of the South-East Magazines. The Temple Repositories and connected cists had spouted two-handled jars with 'trickle' decoration, like those of the North-East Magazines and other vases like the jar with graffito inscription and its companions from the early basements in the south-west region of the Palace and like the tall handsome jars from the 'North-East Kamares Area' referred to above (group 8).

(11) The ware found in 1904 in the latest stratum underlying the pavement of the West Court of the Palace and of the Corridor of the Procession. See *B.S.A.* x. 6, 10, 11. The ware found underlying the pavement of the West Court belonged to the floor-deposits of a house built on the ruins of that which contained the fine polychrome ware represented *ibid.* 15, Fig. 4. Here occurred types of vases, with a purple-black glaze ground, resembling those with lilies from the South-East Magazines, and with a buff ground like those having 'trickle' decoration from the North-East Magazines. The pottery found underlying the Corridor of the Procession

again contained the type of the jars with 'trickle' decoration from the North-East Magazines, while their environment brings us back once more to the similar deposit from the adjacent South-West Basement, which yielded the vase with graffito inscription and its companions (above deposit 1).

The general catastrophe indicated by the simultaneous submergence of the floor-deposits just enumerated may be conveniently taken as marking at the same time the end of the Middle Minoan Age.

DUNCAN MACKENZIE.