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CROSS-BREEDING OF MODERN SCULPTURE

The Nativity, 25 inches high, stone, c. 1250, from the now destroyed choir-screen of Chartres.
"The ambition to achieve the lifelike had become the prime source of aesthetic vitality."

Greenberg the critic-historian. First published in the Fiftieth Anniversary Issue of Art News, Summer, 1952, the essay should be read in conjunction with "The Early Flemish Masters", 1960. Two masterpieces of historical overview.

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SCULPTURE'S CHANGE OF DIRECTION since Brancusi and since Picasso's first Cubist bas-relief construction is the sharpest, it would seem, in its Western history. The last forty years have given birth to a new tradition with an almost entirely new vocabulary of form. But at the same time the old Gothic-Renaissance tradition of sculpture, after a decline of several centuries, has known a rebirth of its own. And curiously enough, both birth and rebirth have been presided over by the art of painting, which has acted as mother to the one and physician to the other.

The connection of sculpture and painting is closer today than for a long time in the past, but is not entirely new. Painting played a part in the death of the Greco-Roman tradition of sculpture, when the latter flattened out into pictorial bas-relief, and then disappeared, as it were, into the frescoed or tessellated wall. And then, hundreds of years later, painting imposed certain graphic conceptions of form on Romanesque carving. The Byzantine mosaic flourished in the East and a Classical sophistication lingered on in some manuscript illustration while sculpture still struggled in the West to transcend the function of ornament. Later, the stiff, tubular forms of Romanesque sculpture are scored with lines and covered with colors whose feeling comes from wall decoration or the manuscript picture. The bas-reliefs on the tympanums of many French Romanesque churches look like embossed drawings (especially now that their color has worn off). This is not, of course, the whole story of Romanesque sculpture; far more of it is told in the process by which it wrested itself free from the architectural member, and its somewhat ambiguous success in doing so. But it remains that it evolved to a point under the influence of painting as well as the domination of architecture.

By the Gothic period, sculpture had got ahead of painting in their common progress towards realism, commanded a greater range of effect and a greater variety of mood. By then the ambition to achieve the lifelike had become the prime source of aesthetic vitality in the West, and sculpture, now free to stand in the round, was far more skilful and convincing in its imitation of the appearances of life. Architecture had crowded the pictorial artist out of his role as wall-painter and confined him to small format, or to the designing of stained glass, in which capacity he was more exclusively a decorator and less a limner. Besides, the sculptor, as E. H. Gombrich points out, in any case had the initial advantage over the painter in that it demanded less of an effort of abstraction to transpose stereometric reality into a stereometric medium than into a planimetric one. And in Italy the relics of antique bas-relief offered the artist who did not participate in the Gothic movement an example in naturalism not matched, apparently, by what then could be seen of Roman painting or mosaic.

From the thirteenth century on, sculpture shows the way to painting, teaching it how to shade for roundness and depth, how to pose and group the human figure. Leon Battista Alberti, in his influential Treatise on Painting (1463), says
"... I would rather have you copy an indifferent sculpture than an excellent painting. Because from paintings you will gain nothing further than ability to copy accurately, but from statues you can learn both to copy accurately and represent light and shade." And there was the practice among painters, then and later, of making little models in plaster or clay not only to paint from, but to manipulate in solving problems of arrangement and composition. This shows how much easier the painter found it to visualize in sculptural terms, and his readiness to accept sculpture as a substitute for nature.

Despite the sumptuous tradition of miniature painting behind it, Flemish and north French painting at the beginning of the fifteenth century is stamped large with the influence of Gothic sculpture. Jean Fouquet's Antwerp Virgin and Child, for example, is said by D. Talbot Rice to have "a distinctly sculpturesque feeling, and may be aptly compared with work on some of the great cathedrals a century or more earlier in date." But the influence of sculpture also begins to act as a check on painting's evolution towards a realism proper to itself. The wonder of Jan van Eyck is how he could so suddenly break so far away from sculptural realism in the direction of the painterly realism we see in his St. Francis Receiving the Stigmata at Philadelphia. The artists who come after him in the Flemish fifteenth century, like Rogier van der Weyden, do not attempt such a vividness of pictorial illusion and stay closer to Gothic sculpture, as the Italians of the quattrocento continue to strive after the effect of the antique. It takes painting another century to achieve anything like the fresh, plausible and composed realism that was already to be seen in the midthirteenth-century sculptures of Bamberg and Naumburg cathedrals in Germany. (In the meantime sculpture itself became far more pictorial as well as minute in its naturalism, out of its own resources, not by imitating painting--of which there was none more realistic than itself to take lessons from anyhow.) Only by the end of the fifteenth century does painting free itself from the bas-relief--as sculpture before it had freed itself from architecture--and really rival sculpture in naturalism. When its color begins to breathe and its edges to dissolve, then painting becomes altogether itself (although, as I cannot insist enough, this does not mean necessarily that it becomes better as art).

By the time of Michelangelo's maturity it had already gone ahead of sculpture, as his own example shows more clearly than anything else. Michelangelo, for all his gift for carving and commitment to it, actually realized himself better in painting. Wyndham Lewis wrote lately: "How Michelangelo's titanic dreams are betrayed when they emerge in marble! What a sadly different thing the Sistine Adam would be in white marble. The Greek naturalism, in some way, was neutralized in the flat. To affect to prefer Michelangelo's sculpture to his other forms of expression, including poetry, is the result of the literary approach." However, what frustrates Michelangelo's sculpture is not its naturalism but, on the contrary, its exaggerations of modeling, which are more pictorial than plastic and therefore of greater truth and point in the illusionistic medium of painting than in the much more literal one of sculpture. His efforts to realize his as-
pirations in stone violated its nature. True, he may have done some violence to the nature of painting, too, and perhaps the Sistine ceiling comes off mostly as tour-de-force-justifying El Greco's comment that it was marvelous but not really painting--but it is the most astounding and successful tour-de-force in Western art.

How sculpture declined and languished under the domination of painting, or rather of drawing, after Michelangelo's time is indicated by the universal and superstitious reverence for his own work as a sculptor. There were good or even great sculptors during the next three hundred years, but they had to cope with an audience whose taste was more informed as regards painting. Yet when sculpture, in the nineteenth century, began to show a new vitality it was precisely under the tutelage of painting--or better, under the direct intervention of painters themselves, and of painterly painters at that, not quasi-sculptural ones like David or Ingres. From Géricault to Matisse and even Picasso, the general level of the occasional sculpture of painters seems much higher than that of any but the most exceptional professional sculptors. One of the reasons for this may be, paradoxically, that the painterly touch benefited sculpture more at that point in its development than the Neo-Classical and draftsman's ideal of a hard, translucent nudity. The sculptors were too fascinated by Raphael's and Correggio's drawing, and in their devotion to outlines, shadows and silhouettes neglected mass and volume.
Hiram Powers' *Greek Slave*, 5 1/2 feet high, marble, 1843, Newark Museum. "the Neo-Classical and draftsman's ideal of hard, transluscent nudity."

In a sense the sculpture of the painters culminated in Rodin, who has been reproached for vitiating sculptural form in his pursuit of Impressionistic effects. There may be a little justice in this, but it misses a larger point, which is that Rodin became loose and spontaneous as no sculptor had been for a long time before him. Barye and Bourdelle, for all their excellences, remain a little constricted. Perhaps Rodin was no great master of style in the way that the sculptors of Fifth Dynasty Egypt, Phidias, and the Gothic stone-carvers were, but he was a very great artist nevertheless. He made stone and bronze vibrate once again, restored variety to traditional sculpture and gave tradition itself a fresh impulse by which it is still moved today.
Traditional sculpture at the beginning of this century benefited by more than the example of a great artist. Avant-garde painting and poetry had generated the notion of a maximum of "aesthetic purity" that could be achieved by working as closely as possible within the essential and intrinsic limits of the medium concerned; a stricter and more radical separation of the various arts was aimed at than Lessing could ever have dreamed of. One of the ultimate results of this new and largely unspoken aim was abstract art, but meanwhile traditional sculptors learned a new respect for the monolith, the first and last premise of the medium of carving. Maillol, Despiau, Lehmbuck, Kolbe, then Marcks and others—all of them indebted at the same time to painting for a certain approach to proportion and shape-carved and modeled now with an eye to simplified, abiding, compact form that would call back to mind the original block of stone or lump of clay. Brancusi drove this canon to an ultimate conclusion, and suddenly arrived back at architecture—and painting. Or almost. It was, at any rate, a new kind of painting whose attraction sculpture now felt, a painting infused with sculptural elements out of barbaric and exotic traditions and leading, under the more fundamental influence of Cézanne's painting, toward that sublime and supremely coherent style we call Cubism.

Renoir's *La blanchisseuse*, 13 inches high, bronze, 1916.

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A few years later, shortly after 1910, painting knew its most spectacular triumph over sculpture by delivering out of itself an almost entirely new convention and tradition of sculpture. There sprang up a novel kind of art with practi-
cally no antecedents in previous sculpture (unless we include the wood carving of the Northern New Irelanders in the South Seas). It was called Constructivism at first, and drew in air with line, plane and color to create cage- or machine-like structures not solid bodies. It did not shape or form solid matter so much as manipulate space--organize and render significant its emptiness. It had emerged directly from Cubist painting, when Picasso first let the bas-relief construction rise above the physical surface of the collage. Painting had felt the urge as far back as van Gogh, even Cézanne, perhaps Renoir, too, to take over some of the powers and attributes of sculpture; now it did that by becoming sculpture itself. W. R. Valentiner has said that sculpture has the tendency in the course of time to evolve from the architectural towards the pictorial; the curious feature of the new, "open" sculpture, however, is that its means and forms, as pictorial as they are, tend to converge toward architecture, in its modern, functional manner, more than towards anything else. And yet this is all painting's doing.

For the time being the new and the old traditions of sculpture exist side by side. But the former gains constantly in energy, while the latter's seems to be slowly ebbing away, with too few younger artists appearing to take up where the old guard of forty years ago is now leaving off. The Italian archaicizers--Marini, Manzu and Fazzini--have talent, especially the latter two, but it is all they can do to produce work that transcends superficiality and fashion; and whether Europe has other younger sculptors in the traditional line capable of doing more than they is not clear. On the other hand, what the new tradition has so far produced cannot be compared on the whole for value with the art Maillol, Lehmbruck, Brancusi and the others have created, and perhaps--as in Gerhard Marcks' case--are still creating. Yet to venture such a comparison may be unfair, since many of the representatives of the new tradition, especially in this country, where that tradition seems by now to have struck firmer root than elsewhere, still have their effective futures before them.

Some of our American constructor-sculptors, the more gifted as well as the less, flounder in their new medium, at a loss for guiding examples, go off down blind alleys, or commit horrible errors of taste--particularly now that the tide has turned for the moment away from geometrical forms toward plant and animal ones. Infatuation with their new-found liberties often leads to an attempt to force complications of line, texture and color that no kind of sculpture could admit or accommodate. A few make a virtue of these excesses, find impulses to invention in them, and then in interludes of purification realize beautifully. I think in this connection of David Smith, possibly the most powerful yet subtle sculptor ( subtler, really, than Flannagan) this country has yet produced, certainly the best since Gaston Lachaise. And in a different direction there are the combinations of abstract sculpture and painting of the Austrian-born architect Frederick Kiesler, who personifies the recent stylistic union of painting, sculpture and architecture in an exemplary way. He, in particular, has given us only a sample of all he has to say.
At present sculpture is on the point of turning the tables on painting with respect to fertility of ideas and range of possible subject matter. But the new sculptor still remains a little too timid in the face of the other art, too passive, and still too ready to accept any and all of its suggestions. This is excusable when we remember for how long a time and until how recently, painting did lead the way, and how much more interest and excitement could be found in almost any painting than in almost any piece of sculpture contemporaneous with it. But it is time we became conscious of the changed relation between the two arts, and that the new sculptor himself acquired more confidence in the independent power of his medium.

He is not, alas, entitled to equal confidence of its acceptance by society. The modern architects exclude sculpture from their buildings even more than they do painting, so that the new sculpture remains more or less a homeless art, unsuited as it is to the ordinary domestic interior. As has been said often, the fate of figurative art in our time hangs ultimately on its physical and social reunion with architecture. Romanesque sculpture began as an accessory of architecture, took its style and value from it, and prospered thereby. The new
sculpture began and grew entirely outside architecture, and gives to it more than it receives, perhaps, in the way of style. This may be one of the reasons why the modern architect resents or feels indifferent to its presence, just as he does to that of painting, to which he owes even more stylistically. I believe this is one of the serious aesthetic misdeeds of our time. With all the talk, right or wrong, about the "inhumanity" of a strict functionalism, one would think that the modern architect could cope more effectively with the complaint by calling in sculpture as well as painting, instead of plaguing himself with the task of complicating what is rightly simple.
Pure-breeding is defined as breeding activities within a species and cross-breeding as the systematic or unsystematic combination of two or more breeds. Breeding activities conducted by individuals or small informal groups of breeders are not considered. Breeds under conservation programmes than to the main breeding programmes. The quality of the information and the degree of detail presented are, thus, very variable. Information about objectives and the scale of the active breeding population is not provided in many Country Reports, and in several cases it is difficult to conclude whether the reported breeding programmes are actually being implemented, are planned, or are historical events. The second reason to consider cross-breeding is heterosis (or hybrid vigor), wherein (unlike the poor rabbage), the F1 is superior in some trait to either parent. Heterosis can occur between a cross of two lines that otherwise seem nearly identical. In such cases, the purpose of creating hybrids is not to combine advantageous traits, but rather to uncover favorable genes that are masked by either dominance and/or epistasis. It is this latter aim that is our main focus in this chapter.

Chapter 31. of crosses that can be used, followed by a short discussion of the role of hybrids in modern agriculture. We then turn to the nuts-and-bolts of crosses: the genetic variances between lines, estimating the effects of lines for combining prediction of lines means, and rotational cross-breeding. Many breeders began to breed bulldogs with terriers, arguing that such a mixture enhances the quality of fighting. Despite the fact that a cross between a bulldog and a terrier was of high value, very little or nothing was done to preserve the breed in its original form. Due to the lack of breed standards, breeding was for performance, not appearance. The “Bull and Terrier” eventually divided into the ancestors of “Bull Terriers” and “Staffordshire Bull Terriers”, both smaller and easier to handle than the progenitor. One I find especially sad is the effects of modern breeding on German Shepherds. I love those dogs, but the characteristic hind crouch has gotten out of control. permalink. This paper is the accepted version of IEEE copyrighted material — I. Colonnelli, B. Cantalupo, I. Merelli, and M. Aldinucci, Streamow: cross-breeding cloud with. HPC, IEEE Transactions on Emerging Topics in Computing, 2020. DOI:10.1109/TETC.2020.3019202. Abstract Workows are among the most commonly used tools in a variety of execution environments. Many of them target a specic environment; few of them make it possible to execute an entire workow in dierent environments, e.g. Kubernetes and batch clusters. A crossbreed is an organism with purebred parents of two different breeds, varieties, or populations. Crossbreeding, sometimes called "designer crossbreeding", is the process of breeding such an organism, often with the intention to create offspring that share the traits of both parent lineages, or producing an organism with hybrid vigor. While crossbreeding is used to maintain health and viability of organisms, irresponsible crossbreeding can also produce organisms of inferior quality or dilute a