Anni Albers
On Weaving

NEW EXPANDED EDITION

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Princeton University Press
Princeton and Oxford
in association with The Josef and Anni Albers Foundation

Draft Notation

If the construction of a weave consisted of nothing more than the basic weaves, it would be a simple matter to draw the directions for the intersecting of warp and filling in a representational manner, showing the actual interlacing of the threads. It would be possible, also, to indicate by numbers the warp threads alternately raised or lowered, as is frequently done in the case of simple twills. But with the modification and elaboration of weaves, matters get complicated, and a simplified manner of notation is needed.

A standard system for drafting weaves has, with slight variations, been generally accepted by industry—in power loom as well as in foot-power loom production. This shorthand of draft notation uses graph paper as a framework. The space between its evenly spaced verticals is understood to indicate the warp threads, that between the horizontals, spaced similarly and intersecting at right angles, the filling threads. The little squares thus formed denote the intersection of warp and weft. A raised warp thread is marked by filling in a square. Thus an empty square means that here the filling is showing. This is all that is needed to give an accurate account of the construction of a weave, although, of course, it does not give a naturalistic representation of it.

Plates 10, 11, 12

When the order of the interlacing threads in a weave is made out and recorded, it will be evident of what elements a weave is composed and how many warp and filling threads go into the basic unit of construction. This unit contains all the structural components and is all that is actually required as information about a weave. However, a number of repeats of this unit are

usually needed to recognize the scheme of a design. In order to separate the first unit clearly from the repeats, it has to be marked as such. Ordinarily this unit is placed in the lower left-hand corner of the draft and is distinguished either by a different color—red for the unit, blue for the repeat—or, in a black-and-white representation, by a different graphic means. Sometimes the limits of the unit are just marked at the lower left-hand corner on the outside of the draft. The unit should thus be recognizable at first glance and convey immediately the number of warp and filling threads needed for the construction of the weave.

With few exceptions, gauze or leno weaves, for example, any weave can be drafted in this manner. Lengthy descriptions of the execution of a weave, giving the threading, the tie-up of the loom, and finally the sequence of weaving operations, can be easily reduced to this simple notation, which gives all the necessary information. The construction of a weave can be understood by reading the draft, instead of having to go through the lengthy process of actual execution. Compared to a laborious realistic portraiture of a weave, showing mainly its appearance, this notation, besides being easier and faster to perform, has the additional advantage of showing clearly those structural elements that do not appear on the surface and can thus be shown naturalistically only by distortion. In historical research work, also, the general adoption of this system of notation, so common in commercial textile work, would mean in many cases a great simplification of recording. It is amazing to see what complicated reporting is often resorted to, instead of transcribing the thread construction into the code of draft writing.

If the shorthand of draft notation as discussed here proves to be a useful tool in the construction of weaves, it is equally helpful in the analysis of weaves—that is, in the tracing of a construction already executed. In analyzing a given piece of material, every filling thread or every warp thread is followed through its course of rectangular intersections with the opposite thread system, and every raised warp thread that crosses over a filling thread is marked according to the system of notation.

Wherever the piece of cloth that is the subject of analysis can be cut, this process of tracing the course of each thread—usually with the help of a long needle—is greatly simplified. For, by cutting along a filling thread, for instance, the path of the thread can be seen in cross section when looked at from above, and the following filling threads can be lifted out one by one, giving a chance for easier observation of the thread's intersections than when

seen on the face of the fabric only. The same holds true when warp threads are traced instead of filling threads. An additional aid in the process of dissecting a cloth is a magnifying glass.

Of course, more than the thread construction has to be identified in the analysis of a cloth: the color of each warp and each filling thread has to be marked at the edge of the draft; the twist of the yarn and its color, as well as the material it is made of, have to be indicated; so do the number of warp and filling threads per inch, centimeter, or any given space. When these facts have been established, all the information required for the reproduction of a cloth has been ascertained, for the procedure of weaving is merely a matter of inference.

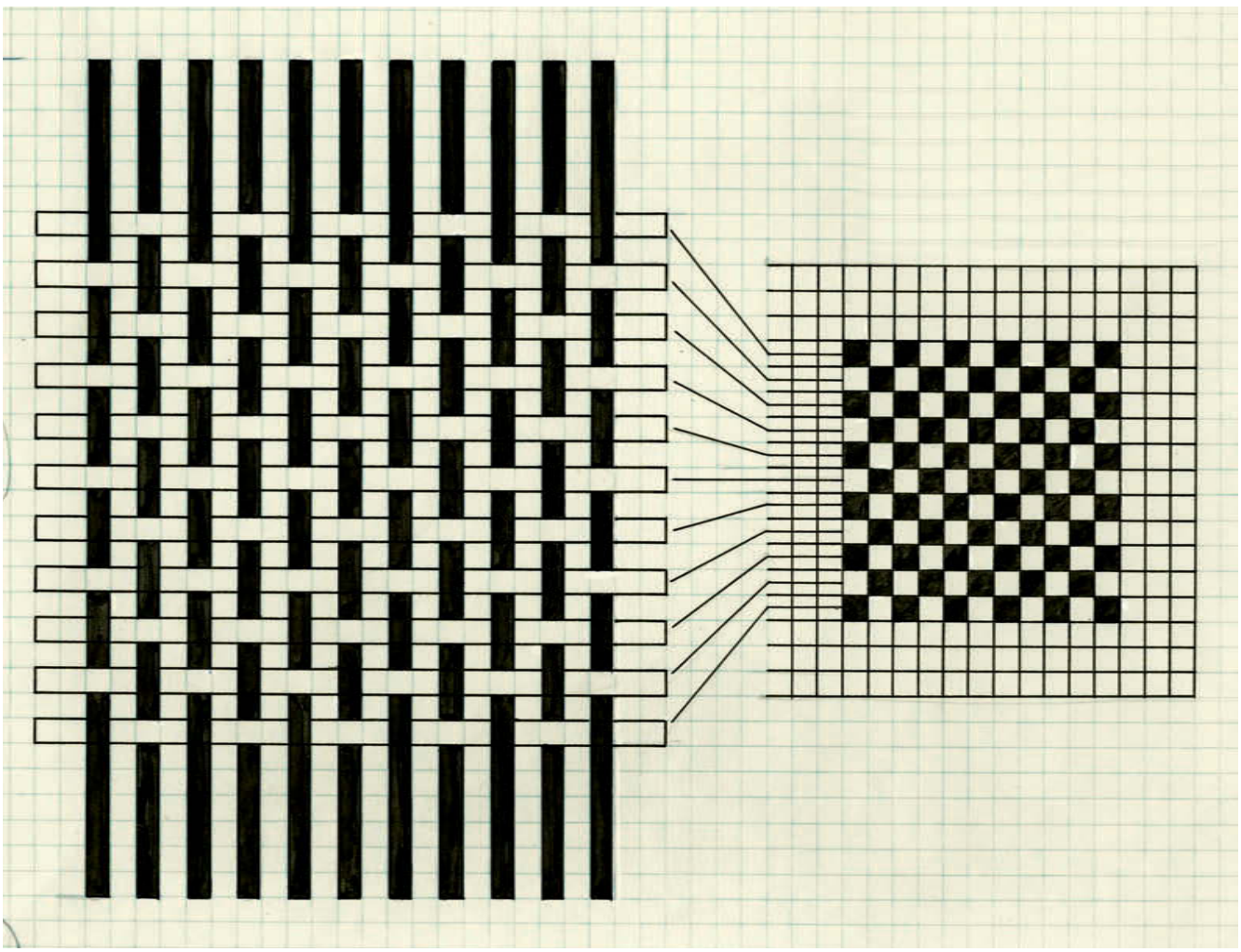

Plate 10. Diagram showing method of draft notation. Plain weave.

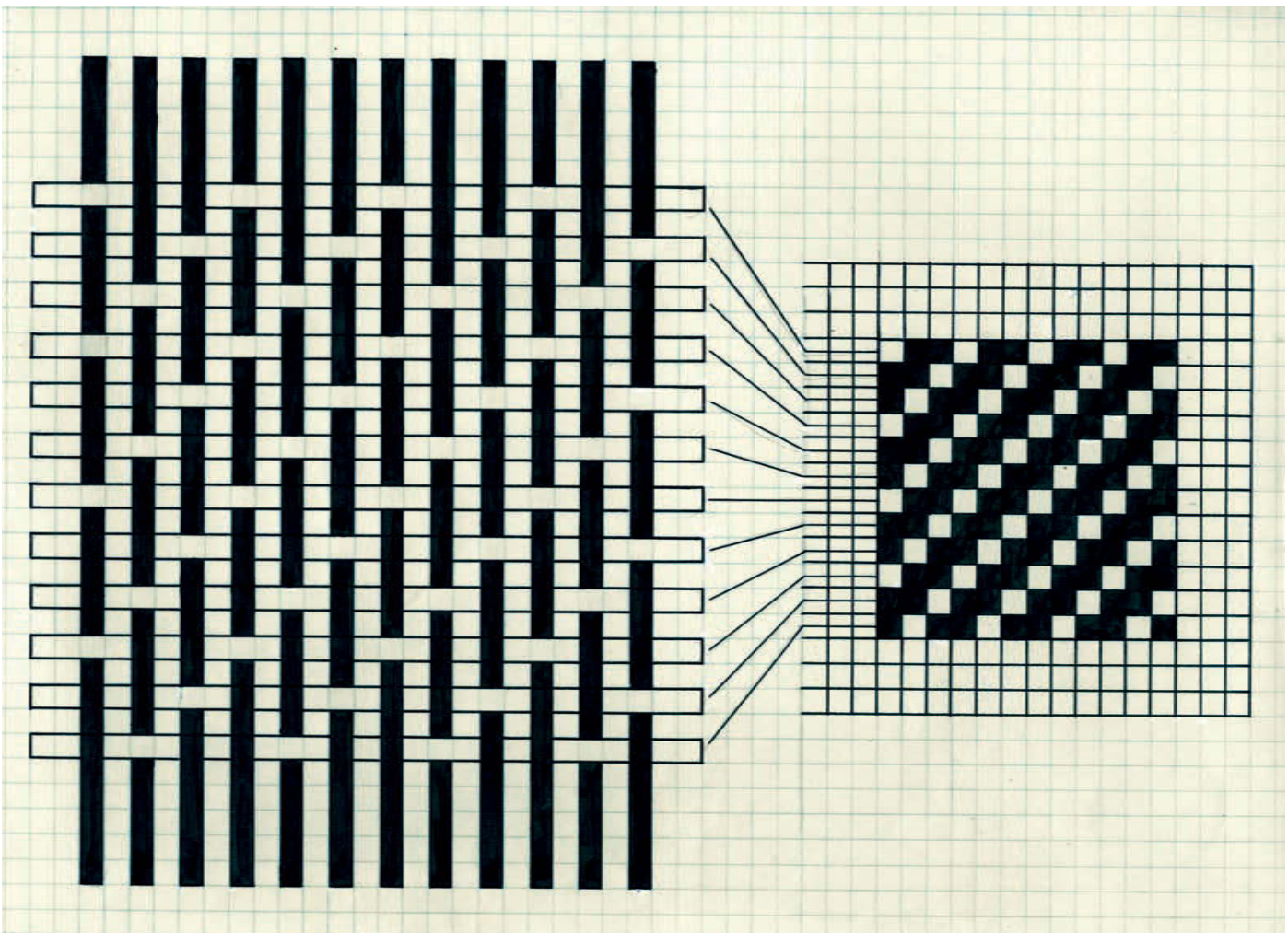

Plate 11. Diagram showing method of draft notation. Warp twill $\frac{2}{1}$ /

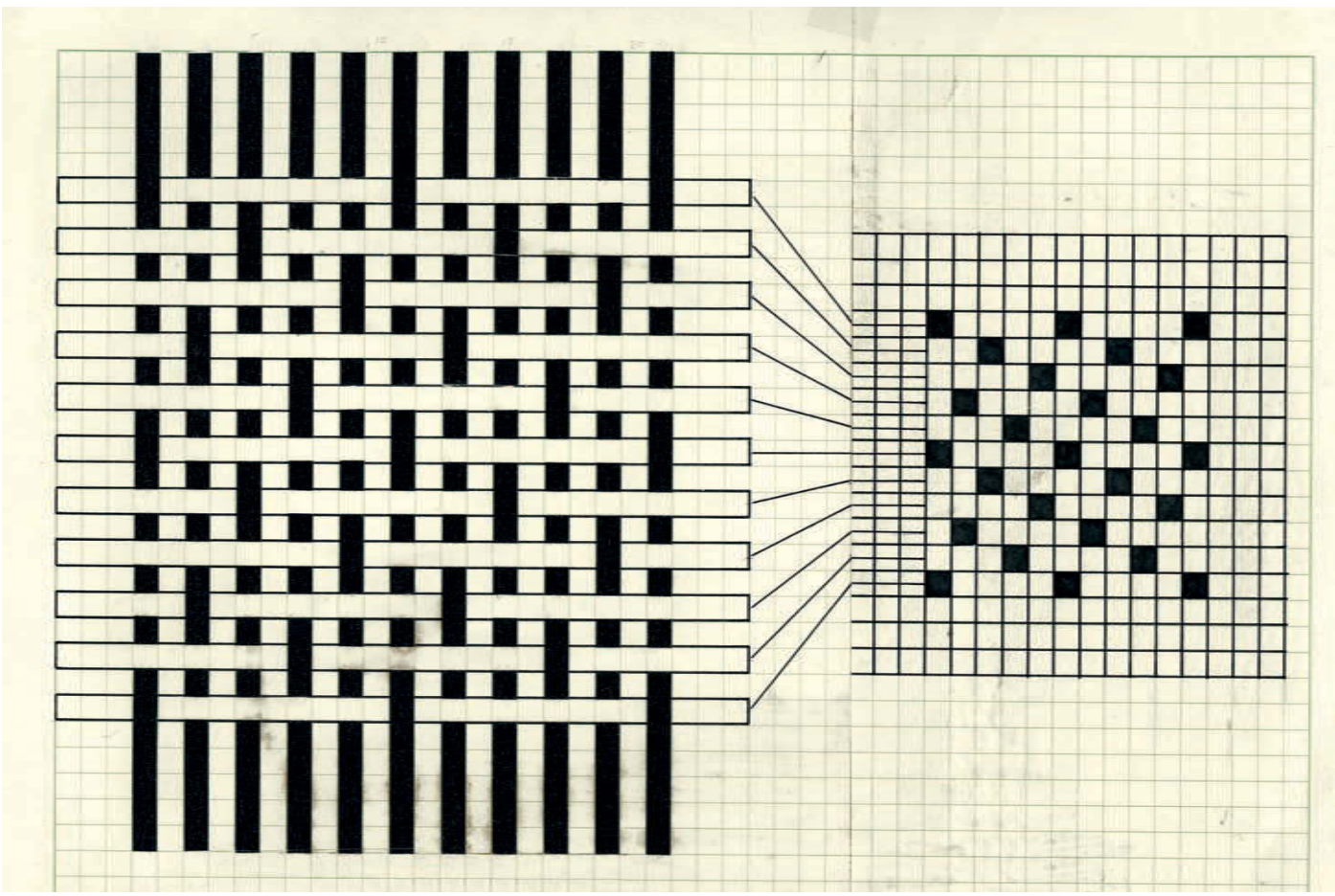

Plate 12. Diagram showing method of draft notation. Weft satin 5-leaf.