

# The Psychoanalytic Study of the Child

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## Notes on the Theory of Sublimation<sup>11</sup>

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It has frequently happened, in psychoanalysis as in other fields, that concepts first devised to account for some more or less occasional observations were later used to refer to phenomena of a far more general nature than had been anticipated. In such cases, these concepts often preserve for a time the imprint of the specific situation they were originally meant to cover, but gradually detach themselves from the particular discoveries which had given rise to their formation. They get more or less integrated into the total field of experience and thought, which process often requires redefinition. To demonstrate this in detail would certainly be a worth-while subject for the historian of psychoanalysis. Suffice it here to remind you of Freud's concept of defense of the nineties, as compared to a later phase in which defense had acquired a structural definition and was recognized as one aspect of general psychology equally relevant for the development of the normal as of the later pathological individual. Or think how the conceptualization of aggression has changed, until finally aggression was realized to be, and defined as, one of the basic instinctual drives. As a third example, I may mention narcissism. Here, too, you will notice several reformulations; the fact that Freud has not quite consistently synchronized the concept of "narcissism" with the level of his later insights and theories has, in this case, led to quite some uncertainties and contradictions in psychoanalytic [thinking](#) and literature.

The subject of my contribution to this panel, the concept of sublimation, shows a somewhat similar development. When first used by Freud, "sublimation" referred to certain cultural or otherwise highly valued achievements and to their derivation from instinctual, which meant at the time sexual, sources. These phenomena were also studied as ways to avoid [conflict](#) while still achieving discharge, to escape the necessity of repression; their relations to the reaction formations of the latency period, their role in artistic creation was recognized. Partly realized was

<sup>1</sup>*Introduction to the Panel on Sublimation, held at the Midwinter Meeting of the American Psychoanalytic Association in New York on December 4, 1954.*

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also their relation to symptom formation on the one hand and **symbolization** on the other hand. All this was described by Freud and other analysts before ego psychology had come to be acknowledged as a chapter of psychoanalysis in its own rights. Later studies on sublimation tend to emphasize its relations to the build-up of the ego in general and to specific ego functions. As in the case of narcissism, we find in Freud's later work new ideas on the subject which, however, he has not quite explicitly developed or used for a redefinition of "sublimation" in terms of his more recent work.

Despite the broad and general use made by analysts of the concept of sublimation and despite many attempts to free it from ambiguities, there is no **doubt** that a certain amount of discontent with some of its facets is rather common among us. Different aspects of sublimation, as usually defined, have been criticized by Sterba (1930), Bernfeld (1931), Glover (1931), Levey (1939), among others. Brierley (1947) speaks of sublimation as an "omnibus term" which comprises a great number of actually different activities. Jones (1941), limiting his indictment to earlier usage only, refers to "the days when analysts were prone to cite the blessed word 'sublimation' as the deus ex machina in all social and idealistic impulses." At any rate, it is, I suppose, these uncertainties surrounding what is one of our basic concepts, that have led to this topic being chosen for a thorough discussion at this Midwinter Meeting.

The most common definition refers to sublimation as a deflection of the sexual drives from instinctual aims to aims which are socially or culturally more acceptable or valued. There may also be a change of **objects**. In this definition, sublimation is actually a special case of displacement, special in the sense that it includes only those displacements that lead to the substitution of worthy aims. The advantage of this approach was that it clearly stated that the highest achievements of man—art, science, religion—may have and often have their origin in libidinal tendencies. But some authors, e.g., Bernfeld (1931) and Sterba (1930), have objected to this definition, pointing out that it is always questionable to include value judgments in the definition of a mental process—which, of course, does not mean that the function of valuation cannot be made the **object** of empirical studies. At any rate, on the basis of such a definition every inquiry into the relations between sublimation and the creation of values rests more or less on a *petitio principii*.

It was, therefore, a reasonable suggestion to eliminate the element of value judgment and to speak of **ego-syntonic** aims (Bernfeld). This important emendation still left many questions unanswered. We are used to saying that in **sublimation** ego aims are substituted for instinctual aims,

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which may be accompanied by a change of objects. But is it really true that it depends only on the aims (and objects) whether or not we can speak of sublimated activities? Here we meet the problem of the relations between sublimation and **sexualization**. Some definitions of sublimation leave open the question what the differences between the two processes are; or rather, they forget to make this distinction. Clinically, we know that **sexualization** of ego functions, beyond a certain limit, interferes with proper functioning, while in a large field of human activities successful functioning depends on sublimation.

In the case of sexualization, we often say that an **ego function** has, mostly unconsciously, been invested with a "sexual meaning." I remind you, e.g., of certain forms of inhibition, described by Freud in *Problem of Anxiety*(1926). However, this concept of "meaning" is in need of clarification. Obviously, in the case of sublimation, too, we may find unconscious genetic determinants of a sexual character. One could try to relate the differences between sublimation and sexualization to the preponderance of the secondary or the **primary** process; to the degree to which the functions in question are, or are not, reality-syntonic; to whether suppression of the function can lead to anxiety; to how likely it is that the ego activity changes into direct instinctual gratification, and so on. All these are no doubt relevant aspects of that distinction and some of them I will take up later. At any rate, it seems that a clear presentation of this problem calls for the introduction of metapsychological concepts. And for the purpose of our discussion we will retain the fact that basing the concept of sublimation on the aims of behavior only, will of necessity fall short of a satisfactory definition. We will also realize that one shortcoming of such a definition that makes no distinction between sublimation and sexualization is caused by its neglect of the considerable differences we find in the stability of ego functions, even of those whose instinctual core is very much alike; differences in resistivity against regression and sexualization—that is its neglect of what I am used to calling degrees of secondary autonomy of the ego. Postponing the discussion of the energetic aspects, the aspects of the modes of energy involved, we may say that the stability of sexualized ego functions and their integration are usually less secure and that they more easily follow the pull of regressive tendencies.

Developmentally speaking, one main trend can be characterized as away from **instinctualization** of ego functions toward greater (secondary) autonomy, that is, better protection against **instinctualization** and regression. The degrees of autonomy vary, of course, from individual to individual, according to the developmental stage, and to different functions

<sup>2</sup>*For an interesting discussion of the stability of ego functions in the **psychoanalytic process**, see Jokl (1950).*

<sup>3</sup>*In discussions of this kind, the early value-tinged concept of sublimation proves to be still very much alive in the minds of many of us. The place in a theory of sublimation of the problems at which it originally aimed I shall briefly outline toward the end of this paper, in terms of Freud's later ideas. At this point, however, it may be good to remind ourselves that the concept of **secondary autonomy** refers to the stability of ego functions only, in the sense just outlined, and not in any way to the "value" of the activities in question or of their results.*

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of the ego.<sup>2</sup> If we take an over-all picture of an individual ego, the degree of autonomy is correlated with what we call ego strength, though it is not its only source.<sup>3</sup>

The dependence of **ego function** on needs is marked in the infant. During the whole of childhood, newly acquired ego activities show a considerable lack of stability, or a tendency to get temporarily reinvolved in the conflicts and instinctual demands that contributed to their development. The child develops special methods to counteract such regressive tendencies (Anna Freud, 1951); (Kris, 1951).

We probably all agree on the developmental relevance of early libidinal cathexis of ego activities. But I should, in this case, not yet speak of sublimation—which has been done, though, by some analysts—because of the reasons just mentioned and because of others not mentioned so far. However, I should think that there is a variety of ways in which these early libidinal cathexes of ego activities may influence later sublimations. **Melanie Klein** (1923a) equates the capacity to cathect ego activities with libido with the capacity to sublimate. She also thinks that libidinal fixations on speech and **pleasure** in movement constitute the preconditions for the capacity for sublimation.

The spreading of **cathexis** on objects, functions, and aims somehow or other related to the original ones is in fact part of the primary process. Thus the ego, and already the precursors of the fully developed ego, become invested with

drive energy. This is a significant factor which partly accounts for the relative emphasis on certain ego functions in the growing child and also for the timing of their development.<sup>4</sup> But such characters of the primary process, as, e.g., displacement, come soon to be partly integrated by the ego and to be used for its own purposes, e.g., defense (Anna Freud, 1936). Displacement is, in a way, also a form of primordial learning, inasmuch as it widens the child's grasp of his outer and inner world (Hartmann, 1952). As to [symbolization](#), its importance for the development of the ego and particularly of sublimation has been

*<sup>4</sup>I do not propose to discuss here the factor of [primary autonomy of the ego](#). Later I shall say a few words about the not unlikely hypothesis that the ego draws, in its [development](#), also on other than instinctual sources of energy.*

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repeatedly stressed by [Melanie Klein](#) (e.g., 1930). Hand in hand with the full integration of the precursors into the gradually developing ego go certain changes in the mode of cathexis we shall have to describe. From that stage on, while one aspect of these functions can still be described as "vicissitudes of an instinct"—you remember that Freud (1915) describes sublimation in this way, among others—it becomes necessary to add a description of their role in the setup of the ego.

I think it should greatly facilitate our understanding of these developments if we here introduce some distinctions. Speaking of sublimation: quite apart from the specific process of sublimation,<sup>5</sup> which we will discuss later, there is a difference between the (sublimated) cathexis of an ego function, on the one hand, and the (sublimated) cathexis of the aims toward which this function is directed, and of the objects through which the aims are achieved, on the other hand. The cathexis of objects of thought or action is not identical with the cathexis of the functions of thought or action. Clinically, we know that aims which presuppose a high degree of sublimation may be retained, though the functions are regressively instinctualized (as in sexualization). This difference holds good also in another respect: we have to distinguish the pleasurable character of an activity from the pleasurable character of its aims. It also seems advisable, which I may note here parenthetically, to differentiate between ego function and the representation of the self, the neglect of which has considerably handicapped our understanding of a variety of phenomena that are frequently lumped together under the heading of "narcissism" (Hartmann, 1950), (1953). There is, of course, interaction between the two aspects I mentioned. What I want to note here is that some concepts of sublimation

referring to the aims only and not to the functions, which are equally important for our understanding of the ego, are less suitable for the advancement of [ego psychology](#).

Even today, we know much more about the origin of specific contents of sublimations, of specific goals, or of interests in a given [material](#), or subject, etc., than of the role of sublimation in the build-up of ego functions (though here, too, important work has been done<sup>6</sup>), and the genesis of the process of sublimation is far from being clearly understood. To trace the specific contents of sublimation to their sources was actually the central issue of research on sublimation for a long time. We can establish

<sup>5</sup>*The word "process" has, in analysis, been used to cover different meanings. One, I think, fruitful attempt to give it a definite place in our field has been made by Brierley (1944).*

<sup>6</sup>*See [Anna Freud \(1936\)](#) on intellectualization, and more recently, for instance, [Rosen \(1953\)](#).*

<sup>7</sup>*I think that the distinction between function and genesis, and the recognition of the principle of [change of function](#), are inherent in what, in analysis, we call the structural point of view. Of nonanalytical psychologists, [Buehler \(1929\)](#) and [Allport \(1937\)](#) have clearly stated the problem, and the latter has systematically developed this aspect of psychology. Both, though, failed to realize its actual role in the framework of psychoanalytic theory, and they consider it contrary to basic tenets of analysis. Most analysts, however, would, I suppose, agree that it is one of the significant features of psychoanalytic psychology that [Freud](#) has succeeded in integrating the genetic approach with a structural viewpoint. See also [Hartmann \(1939\)](#), (1950).*

genetic connections of this kind in much of our clinical material. That the child's conflicts, his instinctual behavior and fantasies, and his anxiety reactions, at least codetermine the contents of later sublimation, was, of course, an important discovery. If one would say—and it has been said—that sublimation is the repetition of an infantile situation, this is certainly in a way true as far as the contents are concerned; though it does not fully clarify what the particular features of sublimation are. The knowledge of an artist's conflicts and [unconscious](#) fantasies often does not sufficiently explain why their working out takes the form of art (see also [Kris, 1952](#)). The thesis which considers sublimation a victory of the id (over the superego; [Róheim, 1943](#)) is certainly due to a failure to distinguish between the function of sublimation and its



genetic aspect. This hypothesis neglects the fact that forces originating in the id may be used by the ego and even turned against the id. It is again an instance—we touched at the problem before, in speaking of secondary autonomy—of a kind of genetic fallacy: the actual function is equated with its history, or rather reduced to its genetic precursors, as if genetic continuity were inconsistent with change of function.<sup>7</sup>

Fortunately, detailed genetic studies usually do more than emphasize the persistence of past conflicts and fantasies in the contents of present sublimations. They often show us the functions that sublimation had in *statu nascendi* and how it is used in the development of the ego, in its relations to id, superego, and reality. They can give us answers to the question which are the actual situations that either promote sublimation or interfere with it. In this respect, child observation which has given us certain clues, might become even more helpful in tracing the impact of objects, [object relations](#), identifications, etc., on concrete sublimatory achievements as well as on the different question of the individual capacity for sublimation.<sup>8</sup> It is probably true that, as Freud states, this capacity is partly inborn—which will appear to us even more plausible today, since we have come to realize that ego functions no less than

<sup>8</sup>*After having written this paper, I read the one by Ernst Kris on "Neutralization and Sublimation: Observations on Young Children" (this Volume, pp. 30-46). His child observations actually fulfill, in a highly suggestive way, what I had in mind here.*

instinctual tendencies may have a hereditary core; but Freud never doubted that external influences, too, have a part in it. Also we would be glad to hear more, in this discussion, from the child analysts and analytic child psychologists, about the typical or individual timing of sublimations. The "beginnings of sublimation" are variously described to coincide with the [latency period](#), with the beginning of the oedipal phase, but also with much earlier stages of development. Of course, the answer to this question will be different according to whether the original, narrower concept of sublimation is used, or a much broader one, to which we now turn.

In *The Ego and the Id* (1923) Freud equates desexualization and sublimation; and thought processes are quite generally subsumed under sublimation. Somewhat later (1926) he stated—again quite generally—that the ego works with desexualized energy. As I said in the beginning, Freud has not systematically synchronized the concept of sublimation with the new level of his psychological thinking; but there are implicit in the statements just quoted fundamental

changes which ought to be spelled out and challenge further development. Here the stage is reached at which sublimation, as other psychoanalytic concepts before, refers to a psychological process, this process being a change in the mode of energy, away from an instinctual and toward a noninstinctual mode. This formulation eliminates the doubts concerning earlier concepts of sublimation that did not account for the clinically essential differences between sublimation and [sexualization](#). Moreover, we see the relations between displacement and sublimation in a new light; not only the aims are (usually) changed in sublimation, but also the mode of the cathexis is. It is even likely that the same aim of the ego may be pursued at times with less, at times with more, sublimated energy; this can be studied in the play of children and in other developmentally relevant ego activities.

The process of sublimation can be linked with several mechanisms, of which displacement is only one. I just mention [identification](#), whose importance in this respect has often been emphasized by Freud and many others. Even more important, the correlation between change of mode of energies, on the one hand, and change of aims or objects, on the other hand, has again become a topic of empirical research, being no longer prejudged, as it was, by too narrow a definition. On this basis, the role of sublimation in the formation of objects, particularly constant objects, can be hypothesized (Hartmann, 1952). Freud approached this subject in speaking of the "tender," or "aim-deflected" strivings toward an object and thought that "if we want," we could consider them as a "beginning"

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of sublimatory [processes](#). I suppose we could assign them their place as one of the many shades of [neutralization](#) in the continuum from fully instinctual to fully neutralized energy, a subject we shall have to deal with later.

That all ego functions are fed by desexualized or sublimated energy (later we will say: by neutralized energy), is indeed only the last touch Freud gave his gradually evolving ideas on the ego, which step by step emphasized its importance in mental economy. It is with this turn in his theory formation that the problems sublimation poses become essential for our metapsychological understanding of the ego. If we agree with Freud's later proposition, we will tend to see in sublimation not a more or less occasional happening but rather a continuous process, which, of course, does not exclude temporary increases or decreases in sublimatory activities. This hypothesis will, of course, also be one more reason for us, and a decisive one, not to limit any longer the study of sublimation to culturally or socially valuable achievements only. The earlier



definition poses an essential difference between some striking sublimatory achievements and other, less obvious ones, though the fundamental psychological process, we want to define, is probably the same in both cases; and, continuing this trend of thought, we cannot attribute, as was done in the past, the "capacity for sublimation" to "the few" only. Obviously, while Freud's later definition emphasizes an essential relation between creativity and the ego, this does not do away with the many psychological problems creativity poses. The striking expression of sublimation we call "creativity" may be quantitatively, but is certainly also in a subtler way, different from other ego achievements.

Taking as his point of departure the same passages in Freud's later work I just mentioned, Glover (1931), in a penetrating study of the subject, comes to the conclusion that "some qualitative change in energy may prove to be the only metapsychologically valid criterion of sublimation." The advantages of the concept are manifold, particularly in the study of specific ego functions, and some of these advantages have been mentioned. Glover suggests a definition which includes displacement together with the change in the mode of cathexis. About the role of displacement, I said a few words before. But the question of what the relations between various mechanisms, as displacement, [identification](#) and others, and the energy transformation actually are, is in many respects in need of further study. At any rate, it seems essential that the nature and relevance of this basic process of energy transformation be clearly conceptualized and that we comprehend its role in the build-up and the functions of the ego.

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Something similar to this, i.e., a conceptualization aiming at the basic [processes](#), has been attempted in regard to other concepts of psychoanalysis and has considerably helped to clarify our thinking on developmental psychology, on clinical problems, and so on. Thus we are used today to defining "defense" in general terms, topographically, dynamically, economically, and structurally. In speaking of a particular defense mechanism, we will add a statement on its specific characteristics and functions. We would rather not include into its definition anything beyond this, as, for instance, the possible long-range consequences of defense as regards neurosis, health, perversion. Many of us would agree today that in speaking of "successful defense," we refer to the fact that the function of the defense mechanism has been performed, its aim has been reached—and not to the possible long-range outcome of health or disease.<sup>9</sup> The latter type of definition would threaten every study of the relations of defense to health and disease with the danger of begging the question.

If we want to achieve the same level of psychological definition in the case of sublimation, we will here, too, have to eliminate all references to "normalcy" or "abnormality," which are frequently included. Thus we cannot accept the frequently used distinction between "true" and "not true" sublimation, if it is drawn with this implication in mind. This certainly does not mean that no correlation of capacity for sublimation, or degree of sublimation of specific ego functions, with states of health or disease exists, or that it is irrelevant. The opposite is true (which, of course, does not imply that in the concatenation of factors that lead to disease, no functions enter which are fed by sublimated [neutralized] energy; see later). At any rate, it is preferable not to prejudge the question. Thinking again of the analogous situation of defense, you will remember how many misunderstandings were created when on the basis of the correct insight into the role of defense in [neurosis](#), it was deduced, which is not correct, that every defense leads necessarily to pathology.

The next question, though essential for our orientation in this field, I will treat rather briefly. I have discussed this aspect of our subject in a series of papers published partly together with Kris and Loewenstein, in the last few years. We have accepted Freud's idea that sublimation of libido is a process by which the ego is provided with energy appropriate to its special needs, that is the energies the ego uses for its specific functions are as a rule not instinctual, they are desexualized. But is there a parallel to this with [aggressive energy](#)? I assume, in agreement with [Melanie Klein](#), Kris, Loewenstein, Menninger, Lampl-de Groot, Hart,

<sup>9</sup>*I know that Fenichel (1945) defines this differently.*

<sup>10</sup>*Menninger (1942) even considers aggression more important in "sublimation" than libido. See also Brierley (1932).*

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and others, that the mode of the aggressive energies too can be changed, in a way comparable to desexualization. It also appears that this desaggressivized energy is no less important for the formation and the function of the ego than is desexualized libido. This, then, implies that self-destruction is not the only alternative to aggression being turned outward; [neutralization](#) is another alternative (Menninger, 1942);<sup>10</sup>(Hartmann, 1948); (Hartmann, Kris, and Loewenstein, 1949). If desexualization is really correlated with defusion of instincts (Freud, 1923), the possible dangers inherent in such defusion could still be counteracted, as long as the capacity to neutralize aggression is unimpaired. If we further assume that self-preservation is, in man, to a

considerable degree a function of the ego (Freud, 1939), we will come to the conclusion that it is actually dependent on [neutralization](#).

We call neutralization the change of both libidinal and [aggressive energy](#) away from the instinctual and toward a noninstinctual mode.<sup>11</sup> The process of neutralization is essential in what we usually call sublimation, and it is mostly this aspect I am dealing with in this paper. But what is the relation of the two terms? There are several terminological possibilities. We may continue to speak of sublimation only in the case where neutralization of libido is involved, because this is the way it was meant by Freud and is still dominant in analytic literature. One may also use the word sublimation for the desinstinctualization of both aggression and libido, making it a synonym of neutralization (Menninger, 1942). An alternative suggestion (Kris, 1952) would reserve the term for the change of aims, often associated with neutralization. Again, the term is sometimes used for the nondefensive, in contradistinction to the defensive ego functions, and for their aims and cathexis. This question of nomenclature cannot be too important in itself and, for the purpose of my presentation, a decision between these alternatives does not seem necessary. What I want to remind you of here is just that much of what I said before about "sublimation," refers to the process now defined as "neutralization." In what follows, you will see from the context where I speak of this process and where I refer to other aspects often associated with the concept of sublimation.

Beyond emphasizing the central position of the process of [neutralization](#) in general in the build-up of the ego, and in its differentiation from

<sup>11</sup>*This term has occasionally been interpreted as referring to instinctual energy somewhere in between libido and [aggression](#). But this is at variance with the term as we use it here. Also, "neutralization" does not mean instinct fusion—though the two processes may be interrelated (Hartmann, Kris, Loewenstein, 1949).*

the id, a certain number of more specific hypotheses are necessary to organize and clarify our [thinking](#) on the great variety of phenomena we have in mind in speaking of ego functions. In what follows, I shall, then, attempt to develop some such propositions based upon Freud's statements quoted above, on the desinstinctualized [character](#) of the mode of energy used by the ego. It is, of course, in elaborating the implications of these propositions, and their applications with respect to specific problems, that their usefulness will have to be tested.

The question is often discussed in analytic literature whether [moral masochism](#), or play, or any number of phenomena "are" or "are not" sublimations. But this is not just an either-or question. I think, it comes closer to observable facts, to speak, as I suggested, not just of two modes of energy of each drive: instinctual or neutralized. Both clinical experience and theory point to the probability that there exists a continuum of gradations of energy, from the fully instinctual to the fully neutralized mode (Hartmann, 1950); (Kris, 1950); (Rapaport, 1950).

If we accept this proposition, the next problem would then be what degrees of neutralization are commonly used for certain ego activities. Individual differences, differences as to situation and developmental level have of course to be considered. But some generalizations may be hypothesized. To draw my example from aggression: there is the unmitigated form of free aggression; the aggression the [superego](#) uses in its relations to the ego is already partly modified; even further removed from instinctual energy is the one the ego, according to a hypothesis I developed elsewhere (1950), employs in counter-cathexis—but it is still aggression and also retains that element of aggression, "fight"; the highest degree of neutralization of aggression, we find in nondefensive ego activities. It is not unlikely that differences between instinctual and neutralized energy go mostly parallel with the differences between primary and secondary [processes](#). This would mean that in this respect, too, transitory phases have to be considered.

That changes in the degrees of neutralization do not without exception coincide with a change of the aims, I have mentioned before in discussing [sexualization](#) (see also Hartmann, 1952). To trace systematically the ontogenesis of ego functions from the angle of change of aims and change in the mode of energy is obviously a subject too broad to be broached here. May I repeat what I said before: that, aside from primary [autonomous ego functions](#), and before the ego has been established as an organization, primordial aims and functions come under the influence of libidinal and aggressive displacements and symbolizations. In the course of development, their cathexes will be neutralized, and they will gain a

certain degree of autonomy vis-à-vis the instinctual drives, which happens in constant interdependence with [processes](#) of maturation. Secondary autonomy is certainly dependent on neutralization. But it would be erroneous to assume that every—maybe transitory—cathexis of a function with neutralized energy constitutes autonomy in the sense we use the term (that is, stability of an ego

function, or, more precisely, its resistivity against regression and instinctualization).

Once the ego has accumulated a reservoir of neutralized energy of its own, it will—in interaction with the outer and the inner world—develop aims<sup>12</sup> and functions whose cathexis can be derived from this reservoir, which means that they have not always to depend on ad hoc neutralizations.<sup>13</sup> This gives the ego a comparative independence from immediate outside or inside pressure, a fact that one is used to considering (though usually not in this terminology) as a general trend in human development. Thus we may say that while displacements partly determine the directions neutralization takes, it is also true that neutralization can lead to displacements, because, as a rule, different degrees of neutralization are not equally well suited for all aims and functions of the ego (I remind you of what I said about degrees of neutralization of aggression, in their relation to different functions; see also Kris, 1952).

There are considerable variations in this respect also from one individual to the other. And in the same individual the level of neutralization, as to one specific function, is not constant.<sup>14</sup> It seems, furthermore, that neutralization of libidinal and of aggressive energy varies independently—or rather partly independently. Berta Bornstein's discussion will refer to this point.<sup>15</sup>

<sup>12</sup>*That the ego sets itself aims was emphasized by R. Waelder long ago (1936).*

<sup>13</sup>*Stating this more completely and with reference to the relationships of the ego and the id (here I do not want to broaden this statement to include the interactions with the superego), we may say: the ego accepts some instinctual tendencies and helps them toward gratification, without change of aims or of the mode of energy involved. In other cases, it will substitute ego aims for aims of the id. This can be done in a variety of ways. The ego aims may lie in the direction of id tendencies; they may be opposed to them (countercathexis); the third group are those nondefensive aims the ego, as I just said, sets itself in the course of development. Ego aims will normally be fed by neutralized energy and achieve a certain amount of **secondary** autonomy. But ego aims may, under certain conditions, also be cathected with instinctual energy—the case we call **sexualization** and **aggressivization**. In the first case, that is the one in which these aims use neutralized energy, the energy is either drawn from ad hoc acts of neutralization, or provided by the reservoir of neutralized energy at the ego's disposal.*

<sup>14</sup>*Kris (1952) introduced the concept of "energy flux," defined as "the transitory changes in energy distribution and redistribution such as the temporary and shifting reinforcement, of sexual, aggressive or neutral energy as it may occur in the course of any type of activity."*

<sup>15</sup>*Her material has not yet been published.*

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Sublimation (which here means neutralization) of instinctual energy is mediated by the ego (Freud, 1923).<sup>16</sup> Freud has particularly emphasized the role identification plays in this process (it is a well-known fact that disturbance of identification often leads to disturbance of sublimation), but it is unlikely that neutralization can be achieved in this way only. Whether, generally, in neutralization object libido has first to be transformed into narcissistic libido—a problem related to the one I just mentioned—is a question not easy to decide. Because of certain variations in terminology, I could not even say positively that this was always Freud's opinion. You know that Freud, and others, have often equated "narcissism" with the libidinal cathexis of the ego. In this sense, the statement that neutralization proceeds through a narcissistic phase could be tantamount to the one mentioned before: that neutralization is mediated by the ego. But narcissism was also meant to refer to the libidinal cathexis of the self (not the ego), as opposed to object cathexis, and this definition of narcissism seems to me in many respects preferable to the one mentioned before. If we accept it, we may then speak of self-representation (in the case of libidinal cathexis: narcissism) in opposition to object representation; but self-representation in this sense is not identical with the cathexis of ego functions. It becomes clinically and theoretically important to make a difference between the cathexis of the self-image, on the one hand, and of ego functions, as thought or action, which may be object-directed as well as self-directed, on the other hand (Hartmann, 1950), (1953). This, applied to our subject, leaves the hypothesis unchanged that neutralization proceeds through the ego (or its precursors). But, if we make that distinction, we will be inclined to say that while a change to narcissistic cathexis will certainly often be one step in neutralization, as, for instance, in identification, this step is not a necessary prerequisite of neutralization in general.

It is well known that in sublimation (neutralization) the ego allows a certain amount of discharge of the original tendencies, provided that their mode (and, often, their aims) have been modified. **Pleasure** gain by sublimation has been often emphasized by Freud and others. The amount of energy that can be discharged this way varies in the estimate of different analysts. The fact itself that sublimation provides us with an outlet, in a different mode, of instinctual



impulses has been made the basis for its distinction from reaction formation (Sterba, 1930); (Glover, 1931); (Fenichel, 1945). Reaction formations originate in defensive measures of the ego. They will also later be used in their counter-cathetic aspects, but we

<sup>16</sup>*And, in view of what we shall discuss later, we may add, already by the precursors of the ego, before the ego as a definite system has been established.*

<sup>17</sup>*Freud occasionally describes **reaction formation** as a case of **sublimation**.*

<sup>18</sup>*See, however, Hartmann (1950), (1953), Kris (1951), (1952), Rapaport (1951).*

<sup>19</sup>*For the cases in which ego functions depend on the use of the **primary process**, see Kris (1934).*

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should not forget that, e.g., reactive character traits will, in the course of development, be invested also with other, nondefensive functions in the framework of the ego (quite apart from the fact, noticed by Freud long ago, that they may also feed on instinctual tendencies opposed to the ones they were built to ward off). This confronts us with a rather complex issue. Glover subsumes reaction formation under displacement, defining it as a displacement into the opposite. The next step would try to account for it in energetic terms. It sometimes appears from analytic writings that sublimation is used as a word for the nondefensive achievements of the ego (see, however, later), which points to the dynamically speaking correct opposition of defensive and nondefensive ego functions. With respect to the modes of energy used, according to Freud's later formulations which I take as a point of departure here, reaction formations too (and for that matter, all counter-cathexes) work not with instinctual but with some shade of neutralized energy. Still it may be that counter-cathexes can be characterized as also energetically differing from other ego functions, which may, at least partly, explain why, according to Freud, they are "set apart" in the ego. As I mentioned before, it seems likely that defense against the drives (counter-cathexis) retains an element (fight) that allows of their description as being mostly fed by one mode of aggressive energy, and that this mode is not full neutralization. In this sense, counter-cathexis in repression appears to be a good example to be contrasted, also as to the energy it uses, with the nondefensive ego functions. Reaction formation (e.g., in character traits) is a less good example, because, as I said, here the counter-cathetic function is often overlaid with other functions of the ego. It is not unlikely, though it may appear paradoxical from a certain point of view (see below), that the nondefensive ego activities have a higher discharge value than the counter-cathexes. The typical reactive character formations

would have an intermediary place—representing on the one hand a defense, on the other hand nondefensive functions.<sup>17</sup> Furthermore, the shift of energy from one ego function to another one seems easier achieved among the nondefensive functions. But this is not to say that defenses cannot also to some extent draw on the reservoir of various shades of neutralized energy that the system ego has at its disposal. The comparative rigidity of the cathexis of some ego functions, as against the comparative ease with which the cathexis of others is changed, is a scarcely explored chapter of psychoanalysis.<sup>18</sup> We have learned from Freud the differences in mobility between primary and secondary processes, and also that, as a rule, secondary

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processes are characteristic of the ego functions.<sup>19</sup> However, we see that there are differences in mobility also between various ego functions. We could try to correlate these differences with degrees of neutralization, and this might actually be part of the truth; but maybe not the whole truth. Some of the most challenging problems of psychoanalysis might become approachable if one were to resume Breuer's and Freud's work on bound and mobile cathexis extending it to the varieties of ego cathexes. Here it must suffice to remind you that the system ego, besides the more localized investments of specific ego functions, disposes of reserves of neutralized energy that can be shifted to points where it is needed. It is probable that in certain psychoses these operations are interfered with, maybe concomitantly with impairment of neutralization (Hartmann, 1953).

We spoke of various degrees of discharge being correlated with various ego functions. But there is also another case relevant for our understanding of the discharge aspect of neutralization. In many situations that call for action, it is probable that the ego appeals to the id for energetic support (this is, of course, an anthropomorphic description; but you understand what I mean). It is further likely that the appeal is mostly made to those forces in the id which, genetically speaking, represent the precursors of the ego activity in question (Hartmann, 1952). Ego and id activities, though often antagonistic, would here be synergic, as they frequently are (Freud, 1926). In these cases there will be an increase in the amount of instinctual energy of the id discharged through the ego, in a more or less neutralized mode. It would be an example of one of those "switching" operations of the ego, of which there are many.

This way of admitting the forces of the id will not interfere with autonomy, as long as the ego's capacities for control and neutralization are unimpaired. The ego's faculty to accept this help without functional disturbance varies from one

individual to the other, and also as to specific functions. The process, though in itself normal, has one aspect that can be described as regressive, and I want at this point to remind you again of Kris's work on "controlled regression" (since 1934).

So far, in opposing defensive and nondefensive ego functions, we have only scantily referred to the fact that there is a defensive aspect to [neutralization](#) (or sublimation) too. Sublimation has often been described as a defense mechanism also, and it is true that it represents one of the most efficient means to deal with "danger" threatening from the drives. Thus it can be used as defense, though it is not always and often not only defense,

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as it takes care, economically speaking, of the nondefensive functions of the ego too. We may add that even where it serves defense, sublimation is hardly a "mechanism" in the usual sense (Fenichel, 1945); (Hartmann, 1952). There is also this difference, if we compare it with other defensive measures, that the change of instinctual to neutralized energy forms at least one element of its definition, thus setting sublimation apart from other defense methods, the concept of none of which refers to a change in the mode of energy. We may say that the process of [neutralization](#) in itself, and in general, can serve defensive purposes, far beyond the more special case in which certain shades of neutralized aggression are used in countertransference.

As I mentioned before, it can also be closely linked with some real [defense](#) "mechanisms," as identification or displacement. More complex is its relation to repression. It has often been said that early repressions may interfere with neutralization (Freud; Melanie Klein, 1932, and others); but also that successful repression may be a prerequisite for neutralization (Nunberg, 1931). Jones (1941) states that there is "an optimum point, where there is neither too much nor too little repression, in relation to which the maximum amount of sublimation occurs." That repressions can handicap neutralization is an uncontested clinical fact. Still, this is certainly not the necessary outcome of every repression. Also, while Freud originally thought that repression makes the energy of the repressed drives definitely unavailable for other purposes, he later (1924); (1926) considered an alternative to this outcome, namely that it may be taken over by the ego and used in, e.g., identifications. Just in passing I may mention that if we use the broader definition of neutralization, there is actually a double correlation with repression; while repression often interferes with neutralization, impairment of the latter can, on the other hand, prevent

the formation of stable repression, as, I think, is the case in schizophrenia (Hartmann, 1952), (1953).

From what I said, it already clearly appears that neutralization (the change of the purely instinctual strivings into a mode of energy more appropriate to the functions of the ego, together with the delay of immediate instinctual discharge, the control by the ego) plays a decisive part in the mastery of reality. The formation of constant and independent objects, the institution of the [reality principle](#), with all its aspects, thinking, action, intentionality all depend on neutralization. According to Hart (1948), it is a compromise between instinct and reality (see also Hendrick, 1943). As I said before, if we accept Freud's statement that self-preservation, in man, is mostly taken care of by the ego, we come to understand neutralization also as a powerful help to this central biological

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aspect of man, not as its opponent as it has occasionally been described. Besides [reality testing](#) and the mechanisms of adaptation, the integrating (or synthetic, or organizing) functions share in the maintenance of self-preservation and they too are not purely instinctual in character but mostly belong to those that work with neutralized energy, though they may be in part genetically traceable to the instincts (Freud, 1923); (Nunberg, 1931), as are other neutralizations.

We have discussed the neutralization of libidinal and aggressive drives, pointing to what these two forms of neutralization have in common, but also to some of their differences, e.g., in relation to specific functions of the ego; I also mentioned that neutralization of libido and aggression do not of necessity run parallel to one another. Here I want to add a few words to what was also hinted at before: the possibility that there exist other, noninstinctual sources of neutralized energy. Most of the energy active in the [psychic apparatus](#) originates, according to Freud, in the drives. But a later hypothesis of his which may be relevant for this question assumes that there exists a hereditary core not only of instinctual, but also of ego functions. This idea I have developed, as to some of its implications, in my work on the primary autonomy of the ego (Hartmann, 1939), (1950), (1952), which prepares the ground for the possibility just presented: namely that part of the mental energy—how much or how little we can hardly estimate—is not primarily drive energy but belongs from the very first to the ego, or to the inborn precursors of what will later be specific ego functions, and maybe also to those apparatus that come gradually under the influence of the ego and in turn influence its development. It is true that

such a hypothesis, though appealing on many grounds, cannot today be proved. But this is equally true of the hypothesis that really all mental energy stems from the primary drives. Both assumptions lead ultimately back to physiology (Hartmann, 1950).

Not only the longest known, but also still the best studied sources of neutralized energy are the sexual drives. May I insert here some remarks on a problem, widely discussed in analytic literature: the question of what kinds of sexual energy lend themselves best to sublimation. The question has been answered in various ways. In one passage, Freud (1917) states about sublimation that "it consists in the abandonment, on the part of the sexual impulse, of an aim previously found either in the gratification of a component impulse or in the gratification incidental to reproduction, and the adoption of a new aim, etc." Freud (1908) also considers the occurrence of sublimation as a consequence of sexual [abstinence](#) (for the case of the scientist). Here he implies the sublimation of

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genital libido, and, in the first quotation, he states that both pregenital and genital libido may be sublimated. In another passage (1908) he assumes that the greatest part of sublimation has its origin in pregenital strivings. Fenichel (1945) and even more definitely Deri (1939) think it unlikely that genital libido can be neutralized, and Flescher (1951) seems to share this opinion; while others, like Sterba (1942), allow at least of the occurrence of some degree of genital sublimation. Both Fenichel's and Deri's thesis is deduced from theoretical premises which I cannot go into at this point. Personally, I cannot fully agree with those premises nor, therefore, with their arguments for discarding genital sublimation. That normally a considerable part of pregenital impulses is sublimated, is very likely true. But I do not see any definite reason to deny the occurrence also of neutralization of genital libido. Alpert (1949) emphasizes the apparent contradiction that even when the genital level has been reached, only pregenital strivings should be sublimated. There is some uncertainty also as to the question whether only object libido can be sublimated. Glover (1931) points to the fact that at least part of the pregenital tendencies, from which so much of the sublimation is derived, are not object-directed. These and related questions do not necessarily enter the definition of sublimation. But these and other differential considerations may become relevant if we study the developmental aspects of neutralization, or the relations between certain of its forms (as to gradation, as to origin, and so on) on the one hand, and specific contents, or functions that it serves, on the other hand. I first realized the relevance of this latter category of problems in

studying the energetic aspect of [countercaathexis](#), about which I said a few words earlier in this paper.

As mentioned before, it is difficult to ascertain when neutralization starts in the child. It has often been traced to early frustrations and renunciations. Hart (1948) has particularly emphasized that renunciation which comes from love is more likely to promote neutralization than the one which comes from fear. The child's siding with reality demands (Anna Freud, 1954) and the early identifications are no doubt an important step in the use and spreading of neutralization.<sup>20</sup> At any rate, we have to assume that neutralization starts very early, if we follow the lead of Freud's later definition which seems to me the most logical one. It must start even before the ego as a definite system is established and before constant objects are constituted—because it is likely that

<sup>20</sup>*For the formation of early countercaathectic energy distribution in their relation to [neutralization](#) see Rapaport (1950), (1951) and Hartmann (1952), (1953).*

<sup>21</sup>*Aspects of [sublimation](#) as, e.g., the elaborate stratification described by Bergler (1945) belong obviously to a much later age.*

these achievements already presuppose some degree of neutralization.<sup>21</sup> This also implies that neutralization cannot be assumed to be initiated by the superego, though its secondary relations to the superego are clinically and developmentally of paramount importance. That certain types of superego formation may interfere with neutralization is amply documented clinically. Alexander (1923) stressed the point that every tendency to self-injury may handicap it. On the other hand, the aspect of the superego that Freud calls the [ego ideal](#) is most influential in determining the direction of neutralization on certain aims or functions—which does not mean, as Freud reminds us, that the capacity for sublimation is in any way proportional to the sublimity of the demands.

This is obviously one of the problems that stood at the beginning of psychoanalytic research on sublimation: the question of the meaning and the origin of those sublimations which are syntonic with the demands of the [ego ideal](#). Today we would say that this is not "the problem" of sublimation or neutralization, but it is certainly one aspect of it. It was necessary to broaden the concept—maybe so much that some of you feel uneasy with it—in order to make it maximally fruitful for our understanding of ego functioning (some of the pertinent problems I have presented to you today) and for a comprehensive



view on ego-id relations. On the basis of these insights, the old sublimation problem, sublimation in art, religion, etc., has, then, to be attacked anew. If our reasoning is correct, we should expect to find that the later formulations prove more elucidating, even in regard to those "cultural achievements" than the original concept was meant to cover. So far differential research along these lines has not been done in all the fields relevant to that subject. But it has been done for one of them: art and the artist. I think that a work like that of Kris, *Psychoanalytic Explorations in Art*(1952), which uses the later and more complete conceptual framework, does bear out this expectation.

To summarize: we found that while conceptualization of "sublimation" has changed, the most important single factor among several that at one time or another entered its definition, is the process of desinstinctualization (neutralization). In adopting a broad concept of neutralization I follow Freud's later formulations on [desexualization](#). It opens the way to many problems essential for the metapsychology of the ego and of ego-id relationships. Because of obvious reasons, the earlier concepts have not become, and could not become, equally meaningful in this respect.

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In studies about "sublimation," situations that give rise to neutralization, or the genetic determinants of its contents, or the mechanisms that are often connected with it, etc., are sometimes not clearly set apart from the process itself, a neglect which has often led to ambiguities. I have suggested in this paper to consider, besides the general character of the process, the twofold (or probably trifold) origin of neutralized energy in the two drives (probably also in the ego);<sup>22</sup> the capacity to neutralize which varies individually, according to the developmental level, to the situation, etc.; the incentives to neutralization, under the pressure of the id, under the direction of the ego (and later of the superego); the ontogenesis of neutralization; the neutralized cathexis of aims of the ego, as opposed to that of ego functions; the role of neutralization in defensive as well as nondefensive ego functions and the difference of cathexis of these two sets of functions; the gradations or shades of neutralization, in particular with respect to the various functions they serve; the partly different use of neutralized libido and neutralized aggression; the correlation of neutralization with [secondary](#) ego autonomy.

I know that this introduction to our discussion falls considerably short of a systematic presentation, and I am fully aware of the tentative character of some of the hypotheses I introduced. The accent was on the importance of Freud's later concept of desinstinctualization for the psychology of the ego,

and, on the other hand, on how our understanding of some aspects of [sublimation \(neutralization\)](#) can benefit by the introduction of ego-psychological propositions. I also tried to give you some indications where potential ambiguities lie, and where, on the other hand, fruitful possibilities of future investigation may be found.

## REFERENCES

Alexander, F. 1923 The Castration Complex in the Formation of Character *Int. J. Psychoanal.* VI [↗](#)

Allport, G. 1937 Personality New York: Henry Holt.

Alpert, A. 1949 Sublimation and Sexualization *Psychoanal. Study Child* III/IV [↗](#)

Bergler, E. 1945 On a Five-Layer Structure in Sublimation *Psychoanal. Q.* XIV [↗](#)

Bernfeld, S. 1931 Zur Sublimierungslehre Imago XVII

Brierley, M. 1932 Some Problems of Integration in Women *Int. J. Psychoanal.* XIII [↗](#)

Brierley, M. 1944 Notes on Metapsychology as Process Theory *Int. J. Psychoanal.* XXV [↗](#)

Brierley, M. 1947 Psycho-Analysis and Integrative Living *Int. J. Psychoanal.* XXVIII [↗](#)

Buehler, K. 1929 Die Krise der Psychologie Jena: Fischer.

Deri, F. 1939 On Sublimation *Psychoanal. Q.* 1939 [↗](#)

Fenichel, O. 1945 The Psychoanalytic Theory of Neurosis New York: Norton.

<sup>22</sup>*A terminological note is to the point here. Strictly speaking, energy that from the start belongs to the ego can, of course, not be termed "desinstinctualized" or "neutralized." It could be called "noninstinctual" and is probably best called "primary ego energy."*

Flescher, J. 1951 Mental Health and the Prevention of Neurosis New York: Liveright.

- Freud, A. 1936 *The Ego and the Mechanisms of Defense* New York: International Universities Press, 1946
- Freud, A. in collaboration with Dunn 1951 *An Experiment in Group Upbringing* *Psychoanal. Study Child* VI [↗](#)
- Freud, A. 1954 *Psychoanalysis and Education* *Psychoanal. Study Child* IX [↗](#)
- Freud, S. 1908 'Civilized' Sexual Morality and Modern Nervousness *Collected Papers II* London: Hogarth Press, 1933 [↗](#)
- Freud, S. 1915 *Instincts and Their Vicissitudes* *Collected Papers IV* [↗](#)
- Freud, S. 1917 *Introductory Lectures to Psychoanalysis* New York: Boni and Liveright, 1920 [↗](#)
- Freud, S. 1923 *The Ego and the Id* London: Hogarth Press, 1927 [↗](#)
- Freud, S. 1924 *The Passing of the Oedipus Complex* *Collected Papers II* [↗](#)
- Freud, S. 1926 *The Problem of Anxiety* New York: Norton, 1936
- Freud, S. 1939 *An Outline of Psychoanalysis* New York: Norton, 1950
- Glover, E. 1931 *Sublimation, Substitution and Social Anxiety* *Int. J. Psychoanal.* XII [↗](#)
- Hart, H. 1948 *Sublimation and Aggression* *Psychiat. Quart.* XXII
- Hartmann, H. 1939 *Ichpsychologie und Anpassungsproblem* *Int. Ztschr. Psa.* XXIV Translated in part in: *Organization and Pathology of Thought* ed. D. Rapaport. New York: Columbia University Press, 1951
- Hartmann, H. 1948 *Comments on the Psychoanalytic Theory of Instinctual Drives* *Psychoanal. Q.* XVII [↗](#)
- Hartmann, H. 1950 *Comments on the Psychoanalytic Theory of the Ego* *Psychoanal. Study Child* V [↗](#)
- Hartmann, H. 1952 *The Mutual Influences in the Development of Ego and Id.* *Psychoanal. Study Child* VII [↗](#)
- Hartmann, H. 1953 *Contribution to the Metapsychology of Schizophrenia* *Psychoanal. Study Child* VIII [↗](#)

- Hartmann, H., Kris, E.; Loewenstein, R. M. 1949 Notes on the Theory of Aggression *Psychoanal. Study Child* III/IV [↗](#)
- Hendrick, I. 1943 Work and the Pleasure Principle *Psychoanal. Q.* XI [↗](#)
- Jones, E. 1941 Evolution and Revolution *Int. J. Psychoanal.* XXII [↗](#)
- Jokl, R. 1950 Preservation of Sublimation in Classical Psychoanalytic Procedure *Bull. Menninger Clin.* XIV
- Klein, M. 1923a The Role of the School in the Libidinal Development of the Child In:Contributions to Psycho-Analysis London: Hogarth Press, 1948 [↗](#)
- Klein, M. 1923b Infant Analysis *Int. J. Psychoanal.* VII [↗](#)
- Klein, M. 1930 The Importance of Symbol-Formation in the Development of the Ego *Int. J. Psychoanal.* XI [↗](#)
- Kris, E. 1934 The Psychology of Caricature *Int. J. Psychoanal.* XVII 1936 [↗](#)
- Kris, E. 1950 On Preconscious Mental Processes *Psychoanal. Q.* XIX [↗](#)
- Kris, E. 1951 Opening Remarks on Psychoanalytic Child Psychology *Psychoanal. Study Child* VI [↗](#)
- Kris, E. 1952 Psychoanalytic Explorations in Art New York: International Universities Press.
- Levey, H. 1939 A Critique of the Theory of Sublimation *Psychiatry* II
- Menninger, K. 1942 Love against Hate New York: Harcourt, Brace.
- Nunberg, H. 1931 Allgemeine Neurosenlehre Bern: Huber.
- Rapaport, D. 1950 On the Psychoanalytic Theory of Thinking *Int. J. Psychoanal.* XXX [↗](#)
- Rapaport, D. 1951 Organization and Pathology of Thought New York: Columbia University Press.
- Róheim, G. 1943 Sublimation *Psychoanal. Q.* XII [↗](#)
- Rosen, V. 1953 On Mathematical "Illumination" and the Mathematical Thought Process *Psychoanal. Study Child* VIII [↗](#)
- Sterba, R. 1930 Zur Problematik der Sublimierungslehre *Int. Ztschr. Psa.* XVI [↗](#)

Sterba, R. 1942 Introduction to the Psychoanalytic Theory of the Libido New York: Nervous and Mental Disease Publ. Co.

Waelder, R. 1936 The Principle of Multiple Function *Psychoanal. Q.* V [↗](#)

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