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SELF-REINFORCEMENT[1]

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Self-reinforcement in operant situations generally refers to those arrangements in which the subject delivers to himself a consequence, contingent on his behavior. However, it is noted that the definition of all other types of reinforcement make its delivery contingent on the subject's behavior. What is actually at issue is the agent who defines whether or not the response required for reinforcement has been met. In self-reinforcement, the subject himself defines this. In the laboratory, this requirement is machine-defined; in school examinations, it is teacher-defined; and in many clinical self-control situations, it is also independently defined. A reinforcement contingency presupposes such independence, absent in self-reinforcement. Implications for research and practice are discussed and alternative formulations are offered.

DESCRIPTORS: reinforcement, self-reinforcement, self-control, defining agency, response requirements.

Self-reinforcement and its decremental equivalent, self-punishment, are terms that seemingly designate the self-delivery of a consequence by a subject, contingent on the occurrence of his own behavior. The terms (either or both) are to be found in the literature of all three major branches of behavior modification, especially as these are applied to self-control (*e.g.,* Goldfried and Merbaum, 1973). Since this area is an expanding one, any problems associated with the use of these terms are also likely to expand.

The present discussion briefly notes some problems associated with the use of self-reinforcement and self-punishment as they apply to operant or instrumental behavior. Among these problems is a definitional one. Since the language we use can influence our classification of events, the issue is not trivial. A misnomer can categorize as similar, events that in terms of the referent system of discourse used, are not similar. Conversely, it can categorize as dissimilar, events that are similar. Accordingly, yet another problem is created by the effects that misclassification may have on research, application, and explanation. Finally, an alternative formulation is offered that suggests other possibilities, and is consonant with the consequential system of discourse to which self-reinforcement belongs.

Self-reinforcement as a misnomer. When a term is used that designates one procedure as different from another, that term should presumably not be equally applicable to both procedures. Self-reinforcement (the same statements apply to self-punishment, hence this term will not be considered separately) presumably differentiates procedures in which the *agent* who provides the consequence is the person himself, rather than an outsider, such as the investigator or spouse.

Indeed, this use of the term is attributed to Skinner (1953), and it is of interest to examine his discussion. The particular use of the term is evident in his statement that an individual whose behavior has been strengthened may have "arranged a sequence of events in which certain behavior has been followed by a reinforcing

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event" (p. 238). However, the fact that such arrangement is of a very special kind is evident in statements leading to this supposition, on the same page and the one preceding:

> "The place of operant reinforcement in self-control is not clear. In one sense, all reinforcements are self-administered since a response may be regarded as 'producing' its reinforcement . . ." (p. 237)

Self-reinforcement or self-administration of reinforcement is considered to be, at the very least, nondiscriminative from other forms of reinforcement. This is so because it is the lever depression by the monkey, or the key peck by the pigeon, or the turning of a door knob by a human that "produces" the consequence. Self-reinforcement, as used in the self-control literature, presumably does not apply here, but the term describes these excluded relations as well as those it includes. In each of the foregoing cases, it should be noted that it is some agent other than the behaving subject who has made the arrangements. However, the consequence is self-produced. Skinner concludes the statement quoted by noting that what is meant by " 'reinforcing one's own behavior' is more than this". The term is, accordingly, inadequate.

The term is also misleading, since it suggests similarities with laboratory usage. It may not refer to operant reinforcement:

> "Self-reinforcement of operant behavior presupposes that the individual has it in his power to obtain reinforcement but does not do so until a particular response has been emitted. This might be the case if a man denied himself all social contacts until he had finished a particular job. Something of this sort unquestionably happens, *but is it operant reinforcement?* It is certainly *roughly parallel* to the procedure in conditioning the behavior of another person. But it must be remembered that the individual may at any moment *drop the work in hand and obtain the reinforcement.*" (pp. 237-239, emphases mine—I.G.)

Stated otherwise, he can cheat. This opportunity may at times be found in the laboratory, but the effort is to arrange things otherwise. That the individual does not do so, Skinner then suggests, may derive (in the example he gives) from consequential control by *others.*[3] Accordingly, the fact that the person does not cheat, but engages in the task, cannot be explained simply by resort to *his* self-reinforcement by social contact, which he makes available contingent on his finishing the job.

Some effects on research and practice. Such explanation may divert an investigator from examining the contingencies that actually operate. It may serve all other functions served by what Skinner calls an *explanatory fiction,* or what semanticists designate as a *panchreston,* a much earlier term they have redefined to serve exactly this purpose. In application, the term self-reinforcement has often led to the counselling of clients to give themselves some "goodie" only after they have finished certain tasks, or have engaged in other behaviors. When this works, the efficacy of the procedure, as described, recommends it further. Since, after all, this is merely an applied instance of a well-known laboratory procedure called reinforcement, no further inquiry or explanation of the procedure *qua* procedure is needed. The critic who then says, maybe he's doing it to please you, maybe you and he have developed a good relation, maybe you are serving as a father surrogate (transference), is then shunted aside (but notice Skinner's reference to external agents). The bewilderment of the critic who doesn't understand why the client should set up such a silly arrangement when he can get the goodie in simpler ways (Goldiamond, 1975) provokes amazement that, in this day and age, literate people exist who have to be con-

[3]If such consequential control is punitive, the cheating may then be accompanied by the experience of guilt (p. 188).

vinced of all the impressive laboratory work in reinforcement. How insular can they be?

Assigning the efficacy of self-reinforcement simply to the appropriate application of a well-known laboratory procedure, has yet another effect. Since the clinical procedure is clearly *not* a simple application, something else is at work. And if the procedure is effective, that something else which we do not quite understand at present may be quite powerful. By ignoring it through misnaming it, we are not simply overlooking relevant variables. We may be overlooking variables of considerable importance and pervasiveness. Further, the ingenuity of the investigator in harnessing exactly what he does, and what part of the subject's repertoire he taps, is also overlooked by denigrating his procedures to the simple application of the already-known.

What is involved in self-reinforcement? The actual procedures that the term refers to may be exemplified by comparing two cases involving exactly the same stimuli, the same behavioral requirements, and the same reinforcing consequences. One case is a programmed textbook, in which the appropriate answers are written and students then turn the page to see if they are correct, and should advance to the next frame.[4] The other case is of identical material placed in a teaching machine, in one of whose panels students write the same appropriate answers. If correct, as scanned and defined by the machine, the machine will advance the program by presenting the next frame. We shall assume that conditions have been established whereby presentation of the next advanced frame reinforces program participation. A difference between the two cases seems to be that in the former case, the student provided himself with a consequence, whereas in the latter, the machine provided it. The critical dimension of difference *appears* to be self-provision, as opposed to other-provision. The fact that the author of the program created the consequence is irrelevant. For example, if a student says, I shall allow myself to go to the theater only when I finish my assignment, he or she is still engaging in self-reinforcement as defined. If a friend withholds the ticket until the student has turned in the assignment, this is not self-reinforcement, even if the student asked the friend to do this. The fact that neither was involved in production of the movie or printing of the ticket is irrelevant to this distinction. However, the term, reinforcement, as used in the laboratory, whence it derives, would clearly be applicable to the cases of the teaching machine and the friend. Self-reinforcement, as typically used, is exemplified by the text and the self-admission, "but is it operant reinforcement?", to requote Skinner.

The difference is not in the agency that provides the reinforcer, as the term, self-reinforcement, implies. Rather, it lies in who *evaluates* whether or not the *response requirement* for delivery of the consequence has been met.[5] In the laboratory, the tension in the microswitch (or some other arrangement the investigator can adjust) defines the minimal force necessary to activate it, thereby to record a response, to activate consequence-related equipment, and so on. Upper as well as lower limits may be set. This gate need not be defined by force, but by location, as in the definition of a strike in baseball: "above the knee and below the shoulder."[6] The requirement may also be defined by which of the multiple manipulandum choices is effective. And so on. All of these laboratory definitions of the response required to activate reinforcement are independent of any other definitions the subject may make. Where the response does not meet

[4]I am indebted to Professor Susan M. Markle for this example. (*cf.* Markle, 1969).

[5]Bandura and Perloff (1967) note that such "self-evaluation(s) . . . often involves a *social comparison process*" (italics in original). However, with reference to the present discussion, such influence by other agents is not germane to the role of other agents in defining a reinforcement contingency as the term is used in the laboratory.

[6]It may be of interest to younger readers that an even narrower gate once defined the respectability of young woman: a "respectable girl" did not permit petting above the knee and below the waist. *O tempera, O mores!*

these requirements, it is simply not defined as a response. The equipment, so to speak, evaluates the response. It is this *independent* definition of a response as a requirement for delivery of a consequence, in a specifiable relation, that *defines an operant contingency.* And *operant reinforcement is a contingency.* A reinforcer is the consequence component of a (positive) reinforcement contingency. This definition of reinforcement is met by the arrangements in the animal chamber, the classroom examination, and the teaching machine, among others. It is not met by the programmed text or the first theater case, or the other examples given, and designated as "self-reinforcement". There is no contingency relation, as the term is usually defined, between target behavior and specified consequence, since the contingency is not independently defined.

To replicate the contingencies actually involved in self-reinforcement, it is not necessary for the subject to reinforce himself directly, rather than through mediation of a machine or other outsider. For example, if the subject is permitted to rewire the apparatus so that any of the four keys in a multiple-choice or oddity situation governs the consequence, the reinforcing component in the contingency shifts from coming under the control of the discriminative stimulus (or abstraction), to control by the force required to activate the apparatus. However, *the equipment* provides the consequence, not the subject of self-reinforcement. (See Goldiamond, 1975, for a more extended discussion.) One can imagine how readily appropriate control would then be established! The situation described is not far-fetched. It is a limiting example of cases in which the subject sets his own evaluation for defining adequacy of his own efforts. Any teacher who has allowed students to discuss their examination papers with him is acquainted with the arguments he may get: the answer graded as inadequate *was* adequate, the answer was responsive to the question as the student understood it, the grader was arbitrary in his criterion (so, too, is the machine definition of the force of a peck), and so on. The student appears to be asking for self-reinforcement (as usually defined), rather than teacher-reinforcement. What he is actually asking for is self-definition of the response requirement (for the grade). The social contingency in which a person is allowed to obtain a socially important consequence (*e.g.,* a medical licence) on his recognizance of his own adequacy is not generally sanctioned (but this describes the contingencies in "self-reinforcement"). Hanging up a "shingle" without the socially requisite (target) behaviors represents such an alternative contingency. The behavioral components of this contingency include those entering into use of a hammer, nail, and chutzpah, rather than those entering into professional training. Its social condemnation is attested by the pejorative labels attached, *e.g.,* fraud, deception, sociopathy.

If, under conditions of self-definition of the response requirement, target behavior is maintained, as it often is in humans, at least, the task becomes one of explaining *why,* that is, *how come,* in the literal sense of the words. What are the necessary present conditions and the relevant past contingencies? Although there are no *a priori* grounds to assume that use of the misnomer, self-reinforcement, leads one to overlook such explanatory requirements, the misnomer has often had this effect.

Alternative contingencies. Finding a concise contingency-referent term that is in better accord with the actual contingencies than is self-reinforcement seems to be difficult. *Self-congratulation* is such a term, but is limited to a particular type of consequence. Other terms raise other problems.[7] The issue is simply, *upon whose evaluation of the behavior* is the consequence delivered? A contingency of reinforcement requires that such evaluation be independent of the subject. The conditions under which a con-

[7]Self-definition of the response requirement (for consequence-delivery) is in accord with what goes on. However, *self-definition, self-assessment,* or *self-evaluation* as concise terms have other connotations. Rewards and awards are usually contingent on behavior, but *the former* is often considered a nontechnical synonym of reinforcement.

tingency is not met (the case in self-reinforcement) are more variable by far than the conditions under which they are. The set of all such conditions must, accordingly, be defined only by negation of the other set, that is, by exclusion of its elements from it. Accordingly, it would seem that, in applied situations, the conditions that at present come under "self-reinforcement" should be stated precisely, according to the situation. For example, "it was suggested to the client that he take a ten-minute break after each fifty minutes of reading. He was lent a pocket timer for this purpose." The procedure is *not* referred to as self-reinforcement, nor is the timer a discriminative stimulus. What the contingencies actually are is not known. Research in "self-reinforcement" might try to specify these in such situations and in contrived laboratory experiments.

The increased attention to this area derives its impetus mainly from those applied situations described as self-control (*cf.* Skinner, 1953). It is of interest that such situations often describe training in setting up genuine contingencies of reinforcement. Indeed, the target behavior is shaped in accord with such contingencies. Two disparate examples will be given. In one case, the patient learned to control her own hitherto-pervasive scratching from 180 min a week to less than 30 sec. One consequence was a reduction in skin lesions from over 80 lesions of different sizes to fewer than 10 small lesions. This was a *genuine* self-reinforcement situation. The evaluation of whether or not her handling of her skin constituted scratching was *independent* of her own assessment of the target behavior. Her sensitive skin evaluated her behavior, so to speak, and her behavior came under its control. In a vastly different case, the clients were the parents of a schizophrenic adult whom they chose to keep at home. Sessions were devoted to analyzing their logs about home events to ascertain what behavioral changes (including insights) they might make, which might occasion behavior by their son different from his more typical patterns at home. This, too, represents a *genuine* target contingency. The evaluation of whether or not their behaviors toward him were appropriate in this context was *independent* of their assessment of the adequacy of their behavior in "reaching" him. His differential progress, so to speak, evaluated the adequacy of their behavior. In the common language, both parties became more considerate of each other.

The two situations, one involving self-management of behaviors whose adequacy is assessed by one's own body, and the other involving assessment of adequacy by other people, bracket a considerable part of clinical practice. Such self-control situations describe genuine operant contingencies and maintenance of the relevant behaviors is explainable in such terms.

The term, self-reinforcement, can have adverse effects, as was noted. It can function as an explanatory fiction. It can also divert investigative effort away from study of the actual contingencies. An effect of possibly greater importance is suggested by the evident success that has accompanied the deployment of these and related procedures, and the economy by which such success can be obtained. As Skinner notes, "something of this sort undoubtedly happens." What these suggest is the existence of contingencies of considerable power and prevalence, which are already being tapped and deployed. By mislabelling them, through a term classifying them with phenomena that are fairly well understood, we tend to overlook the importance of these phenomena and their novel contributions to research as well as application.

Self-reinforcement does not refer to self-reinforcement, and this is precisely where its contribution lies.

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