Self-recognition in profoundly retarded males*

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Two studies are reported on the capacity of profoundly mentally retarded adults to recognize self. Study A reflects a partial replication of Gallop's (1970) study of self-recognition in chimpanzees, while Study B employed a criterion task suggested by the psychoanalytic conception of primary narcissism. Results of both studies indicate no unequivocal support that the profoundly retarded can recognize self, and they appear less capable than chimpanzees or normal human infants of 7 months. Failure to install self-recognition subsequent to mirror training is discussed and suggestions for further research are offered.

Goldenson (1970) indicates that "body image is a basic component of our concept of self and our feeling of personal identity [p. 168]," hence, knowledge of self is important to all further social interactions. When the focal study group is the adolescent and adult profoundly retarded person (PR), those having mental ages below 3 years, there is little knowledge about whether self-recognition exists. It is known, however, that self-regard and mirror patting are present in the repetoire of 7-month-old normal infants (Gesell et al, 1949) and, lower in the phyletic order, chimpanzees have demonstrated this ability (Gallop, 1970). In an effort to provide evidence on whether (PRs) have the ability to recognize self, two studies employing different criterion tasks were conducted.

Study A constitutes a partial replication of Gallop's (1970) study of chimpanzees' self-recognition, in which a striking variation in Ss' self-image occurred. Gallop provided his chimps with mirror training sessions, subsequently placed Ss under anesthesia, and while sedated, placed a conspicuous nontoxic, nonodorous dye mark on Ss' foreheads and palms of hands. On full recovery, Ss were reintroduced to the mirrored cages and "confessed" their self-recognition ability by directly attending the mirror while obviously working to remove the dye stains. This altered self-image was considered, in relation to the limited attention span of the profoundly retarded, to represent a reasonably adequate criterion task—one possibly capable of evoking an unequivocal response of self-recognition.

Study B reports on the employment of a different criterion task, one suggested by psychoanalytic theory. According to psychoanalytic theory, primary narcissism occurs in the earliest stages of development. Here, the child's libido seeks satisfaction within his own body, while all his environmental interactions have an egocentric quality. "If an individual's emotional development is fixated at this stage, his behavior will be dominated by self-love and self-interest [Goldenson, p. 835]."

When the focal group is the profoundly retarded adult, development is fixated at the earliest stages. Therefore, it is expected that behavior would be dominated by primary narcissism. Within this theoretical framework, PRs would be expected to attend to their environment in an egocentric manner. This should be demonstrated by a selective interest in self-representations. Color photographs are novel stimuli within the institutional environment and, as such, should provide adequate means to assess self-recognition and self-interest. If PRs do in fact demonstrate self-recognition, psychoanalytic theory would predict that they would make the egocentric response and choose a color photo of the self in preference to a peer. Study B reflects a further effort to learn whether PRs can recognize self subsequent to mirror training by giving the PR the chance to choose between representations of the self and peers.

STUDY A: ALTERED SELF-IMAGE

Method

Subjects

Sixteen ambulatory males manifesting no visual or auditory defects were selected from the profoundly retarded population at the Austin State School (Texas). Length of institutionalization ranged from 2 to 8 years (M = 6.4 years). The Vineland social maturity social quotients ranged from SQ 4.0 to 20.0 (M = 12.68), and CA range was 18 to 39 years (M = 23.0). Thus, to the extent institutionalization represents a condition of deprivation or restricted environmental-social opportunity, our Ss have spent a sizable proportion of their lives in a mass-care sex-segregated setting.

Procedure

Three times daily for a 3-day period, Ss were individually taken by the same E to a private room and placed before a full-length mirror. Each session of 15-min duration entailed E putting a hat, coat, and necktie on S and subsequently tapping a mirror to engage S's fullest attention. At the end of the third day of mirror training, Es arrived on the ward housing the test Ss at 2:00 a.m. and placed a nontoxic dye marker on Ss' forehead, all Ss being asleep during this period of time. One hour before their customary awakening, Es awakened Ss individually and, after walking S around for a period of time sufficient to insure an awake state, positioned the S before the mirror.

RESULTS

Two Es independently recorded S's behavior during exposure to the mirror. Observations were recorded for

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any unambiguous response indicative of self-recognition. Mirror patting, smiling, spontaneous closer approach (self-regard), and direct stare in the mirror at the marked area with subsequent effort to remove the marker were all considered critical observations indicative of self-recognition. Es were in total agreement that no S exhibited any unequivocal responses that would suggest the presence of self-recognition. Those Ss who did not spontaneously turn away in apparent disinterest simply stared vacuously for a brief moment, did not pat mirror or smile, and seemed to be awaiting E to direct his next movement. From this study, then, it seems apparent that if (PR) Ss can be trained to self-recognition, the training sessions were too brief or too few, and it must be concluded that self-recognition was not present in this S sample of PRs.

That many profoundly retarded are self-destructive, accident prone, and often epileptic (MacAndrew & Edgerton, 1964; Cleland & Clark, 1966) comprises one possible explanation as to why an alteration in facial self-image of our Ss failed to elicit responses of self-recognition. Perhaps scars, cuts, bruises, and other injuries to the head over the years were of such frequency as to preclude notice of yet another alteration. Another possible explanation could be that, despite Es' observation that Ss were fully awake when exposed to the mirror, e.g., as eyes fully open, some babbling, grunting, etc. would lead one to believe, it is nonetheless possible that our Ss require longer to attain a fully awake state.

STUDY B: SELF-SELECTION

Method

Subjects

Twenty ambulatory male Ss manifesting no visual-auditory defects were selected from the population of PRs at the Travis State School (Texas). Ss were matched identically on length of institutionalization into an experimental and a control group, which yielded an almost identical mean social quotient across groups. However, two Ss from the control group were excluded due to hospitalization and a visual defect. Thus, the CA range in the experimental group was from 16.11 to 23.11 years (M = 20.41). The experimental group's length of institutionalization ranged from 1.3 to 16.11 years (M = 10.67) and their SQs ranged from 7.0 to 13.0 (M = 10.1). Control group CA ranged from 17.4 to 23.10 years (M = 19.86). The control group's length of institutionalization ranged from 5.0 to 15.7 years (M = 10.46) and their SQs ranged from 7.0 to 12.0 (M = 8.88).

Procedure

Ss in the experimental group were individually exposed to a mirror for an average of 3½ min on 3 alternate days. On each of these occasions, E walked S by the hand to a room familiar to the Ss. The room had been cleared of all distracting material, and three Os were hidden behind a partition. The S was then positioned before the mirror. To maximize and rivet attention of S to the mirror, E tapped back of the mirror, put a cap on S's head, verbally praised S on each direct gaze, gave S mini-marshmallows, and reached around S's body and patty-caked S's hands in time with E's humming a lively tune. Thus, all major senses were employed in the training, olfaction included, since most Ss routinely sniffed the marshmallows prior to eating. Following each training session, E walked S by the hand back to the day room.

In order to control for possible effects of individual attention, E walked each control S by the hand across the same dormitory route and for an equivalent length of time as experimental Ss received. During each walk, E spoke to controls in much the same manner as he had to experimental Ss.

One week after the training sessions, E led Ss by the hand to the training room. E held out a tray with the S's own color photo and two color photos of peers (each in a clear plastic frame) and told S to "take one." If S did not respond, further verbal prompting was given. Included in the additional verbal prompting were statements such as "Which one is you?", "Can you find yourself?", or "Where's ---?" (the S's name). S's choice was recorded and S was led by E back to the day room. When each S had had one choice of photos, a second and then a third trial was conducted. The S's own picture was presented on the left on Trial 1, in the middle on Trial 2, and on the right on Trial 3. The control group was tested 2 days later in the same manner.

RESULTS

The major result of Study B was that mirror training did not produce any self-recognition in the Ss, as demonstrated by this task. During mirror training, behaviors occurred, such as patting the mirror and manipulating clothing, while before the mirror that could have been interpreted as self-recognition but could as easily have been interpreted as simply reacting to motion, or as play behavior.

The results of Study B did show that the Ss displayed a high degree of individual consistency in their training and testing behavior. This consistency led to basically position-oriented responding to the picture stimuli; hence, no S showed more than this position-dominated attraction to his own picture. While the behavior patterns of the individuals were highly consistent and predictable, the group behaviors were inconsistent and unpredictable, as noted by Rice (1968) "that even the 6-h-old neonate is apt to be more predictable in his responses to stimuli than the 6-year-old vegetative patient." Hence, the remarkable intrasubject consistency found in this study, together with earlier observations (Altman, Swartz, & Cleland, 1970), reveals a characteristic that might be utilized in future work with PRs. Group inconsistency and unpredictability can easily obscure intrasubject consistency, but intrasubject consistency is evident and could be useful in working with PRs.

One can speculate on several reasons as to why the PRs were unable to perform the self-recognition task. The short period of actual mirror training and the small size of the pictures presented could have been factors. It is also possible that the PRs were unable to understand instructions given in the picture selection or were insufficiently motivated to recognize themselves. Finally, despite their fixation at the earliest stages of mental development, the assumption of primary narcissistically dominated behavior may be inappropriate for PRs. Nevertheless, training did have a significant effect upon the response behavior of the Ss, as noted by

the no-choice responses. A significantly greater number of Ss in the control group had one or more no-choice responses. Hence, although training did not seem to evolve self-recognition, it did seem to have some effect upon the basic social approach behaviors of the PRs.

DISCUSSION

Self-recognition, albeit of a rudimentary nature, has been shown to exist in normal 7-month-old infants (Gesell et al, 1949) and in chimpanzees (Gallop, 1970). In our two studies, no such capacity was demonstrated. Whether or not inadequate opportunity, early sensory and social deprivation, sex-segregated living, etc. are causal is a question for further research. The relative ease with which Gallop (1970) established learning of self-identity in his chimpanzees, however, would argue strongly against the deprivation suggestion. Early and unlimited opportunity for PR Ss to see themselves in a mirror and/or longer mirror training sessions seem indicated to definitively answer this issue of self-recognition in the profoundly retarded.

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