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AUTHOR Davidson, Elizabeth M. C.; Davidson, Graham R.
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ABSTRACT

This study reviews relevant research on same race imitation and reports on a study of imitation under conditions of ascribed and racial similarity in two culturally distinct and separate groups, white and aboriginal Australian children. Ascribed (by the experimenter) similarity and racial similarity resulted separately in greater imitation of a same sex, peer model's toy play behavior, but same race and different race imitation effects were statistically significantly different only for aboriginal children. Ascribed similarity also affected accuracy of recall irrespective of the race of the observer, and in conjunction with the race of the observer. The opportunities of culturally distinct and separate, as opposed to racially distinct, groups for same and different race encounters are discussed as well as the differences in culturally sanctioned learning styles. (Author/CMG)

A CROSS-CULTURAL STUDY OF IMITATION UNDER CONDITIONS OF ASCRIBED AND RACIAL SIMILARITY

ELIZABETH M.C. DAVIDSON

and

GRAHAM R. DAVIDSON *

Department of Humanities & Social Sciences
Darwin Community College
P O Box 38221
Winnellie, N.T. 5789
Australia.

* Address for correspondence

Abstract

Same race imitation amongst American black and white children has been a will-o-the-wisp phenomenon. Here relevant research on same race imitation is critically reviewed and a study of imitation under conditions of ascribed and racial similarity in two culturally distinct and separate groups is reported. Ascribed and racial similarity resulted separately in greater imitation of a same sex, peer model's toy play behaviour, but same race and different race imitation effects were statistically significantly different only for Aboriginal children. Ascribed similarity also affected accuracy of recall irrespective of race of observer, and in conjunction with race of observer. The opportunities of culturally distinct and separate, as opposed to racially distinct, groups for same and different race encounters and differences in culturally sanctioned learning styles are discussed.

A CROSS-CULTURAL STUDY OF IMITATION UNDER CONDITIONS OF ASCRIBED AND RACIAL SIMILARITY

It is usually assumed that learning occurs best when there is racial and/or cultural similarity between a learner and teacher or model. In the case of social learning, such an assumption is not without foundation, as a number of studies have shown that the child's willingness to imitate a model is dependent on his or her ascribed and/or actual similarity to the model. Similarities that enhance imitation include specific personality traits (Kagan, 1967), general background and interests (Rosekrans, 1967; Stotland and Patchen, 1961; Burnstein, Stotland and Zander, 1961; Stotland, Zander and Natsoulas, 1962) and matched reinforcement outcomes of experimental performance (Bussey and Perry, 1976). Actual similarities may include sex and sex-role (Maccoby and Wilson, 1957; Grusec and Brinker, 1975) and real shared life experiences (Hartup and Coates, 1967). Various explanations have been offered for these similarity effects. Bandura (1969) has suggested that ascribed or actual similarities between a model and an observer may mean that outcomes of the model's actions may have high predictive value for outcomes of the observer's same actions. Bussey and Perry (1976) found, where reinforcing contingencies were correlated for the model and observer, that imitation was enhanced. Stotland et. al. (1962), in contrast to Bandura, provided an explanation in

terms of the cognitive demands placed on the observer by the situation, or "cognitive consistency" (Bussey and Perry, 1976, p.1173). According to Stotland et. al., the perception of similarities between a model and observer leads to the perception or active creation of other points of similarity between the two individuals. This is different, again, from the suggestion that greater attention is paid to similar models, possibly because of their salience for the observer (Maccoby and Wilson, 1957, Kagan, 1967).

SAME RACE IMITATION EFFECTS

Despite the seeming strength of similarity effects in imitation research, modeling studies of actual racial similarity between individuals are generally non-supportive of the similarity hypothesis. We will now review briefly these studies. Six of the 12 studies, all American, systematically varied model and observer race (Lott, 1970; Thelen and Fryrear, 1970; Breyer and May, 1970; Thelen, 1971; Cook and Smothergill, 1973; Gable and Heckel, 1974). Holland (1976) studied black children observing black and white models; Gottfried and Katz (1977) white children observing black and white models; and Adams (1974) black and white children observing white models. Thelen and Soltz (1969) unintentionally included in their study black and white children who observed a white model. Simms' (1978) study of black childrens' pro-social behaviour used a black model but in general modeling vs. specifically black modeling situations, imitation of prosocial behaviour

being greater in the latter situation.

Only Thelen and Soltz (1969), Eaton and Clore (1975), and Gottfried and Katz (1977) have systematically studied belief similarity in conjunction with race. The latter study was concerned with altering white children's attitudes to a black model by experimentally controlling the child's and model's beliefs about a certain issue. The authors also looked at belief similarity in relation to recall of the models' speech making behaviour and the expressed intention to imitate those behaviours, if required. Belief similarity resulted in more favourable attitudes about the models, more accurate recall of models' speech making behaviours but not greater intention to imitate the model. Their suggestions for future research included using younger children and a measure of actual imitation behaviour rather than intention. Thelen and Soltz (1969) also found that there was no effect of model similarity or dissimilarity on imitation, but this may have been because their verbal description of the model was not sufficient to induce a perception of similarity and because of actual age and racial differences between models and children. Conversely Eaton and Clore (1975) found that different race imitation increased with gradually increasing levels of contact (ascribed similarity) between black and white children at a holiday camp. Disregarding Simms' monocultural research, only Lott (1970) has presented evidence for same race modeling effects. Using peers as models,

Lott concluded that skin colour is an effective cue for imitation and racial identification which increase as a child gets older.

Various reasons have been suggested as to why observation of a same race model, instead of a different race model, has not resulted generally in greater imitation of the model's behaviour. Thelen and Fryrear (1970) concluded that the effect of racial characteristics on imitation may be mediated by the type of task to be imitated and the reinforcement conditions under which imitation is expected to occur. Hence their findings that black and white children imitated a liberal white model more than a liberal black model, but a stringent black and stringent white model equally, and that white children modelled aggressive behaviour more after watching a black model than a white model (Thelen, 1971) are indicative of perceived status differences between black and white in relation to the task expectations. This explanation is consistent with findings that subjects will imitate a model of high status more than a model of low status (Harvey and Rutherford, 1960; Lefkowitz, Blake and Mouton, 1955) and that similarity implies anticipation of shared similar or dissimilar consequences with a model (Bussey and Perry, 1976). This explanation may also be applied to the study by Cook and Smothergill (1973). Their failure to elicit same race imitation using a picture discrimination task may have been due to an element of status introduced by models referring to the one they "liked best", thus

suggesting to the observers that it is more appropriate to imitate the stated preference of a white model than a black model, especially in the presence of a white experimenter with whom they had to interact while making their response.

Another reason why same race imitation may not occur is because the observer does not believe that he or she shares the ethnic or racial characteristics of the model. This may be influenced by the degree to which the observer identifies with, or expresses a positive preference for different ethnic or racial groups. However, Holland (1976) found a nonsignificant relationship between racial identification of observers and imitation under same and different race modeling conditions.

Adams (1974) has focussed instead on similarities rather than differences in black and white children's past experiences.

> The apparent lack of differentiation may be attributed to the quality of the school attended by children. The school provides both an integrated setting and black and white teaching models who perform their teaching tasks in constructive co-operation. Therefore the issue of "black or white" probably has little affective meaning for these children (Adams, 1974, p.232).

Thus reinforcement expectancies either may distort same race imitation in situations where models differ in status or prestige, or may mask the effect if racially

different children, such as American whites and blacks, have roughly equivalent opportunities for same and different race modeling in everyday life.

THE PRESENT STUDY

The study we report aims to investigate separately the effects of ascribed and racial similarity on imitation of a peer model in a toy play situation in two quite separate and distinct ethnic groups, white Australian and tribal Aboriginal Australian. By choosing these groups, the present study allowed firstly for differences between them, such as use of non-standard (or non-English) dialect, physical racial attributes, and perceived ethnicity which, according to Davidson (1979), are usually contained under the rubric of race, but secondly for differing degrees of contact with Aboriginal and white models.

In this same cultural context, Davidson (1979), using a visual discrimination task, reported that acquiescence on the part of child observers to a peer model's judgement, an indicator of imitative behaviour, was greater under same subject and model race conditions, with acquiescence to the same race model being significantly greater than to the different race model for the Aboriginal children.

The present study was designed with other aspects of the previous American research also in mind. Sex and age of models were controlled. The latter may have counteracted other similarity effects in the studies by Thelen and Soltz (1969), Thelen (1971) and Cook and Smothergill (1973) where children were required to observe adult models performing certain acts. This study used an imitation task

which was neutral in the sense that any existing status differences between an Aboriginal and a white Australian peer model should not confound similarity effects on imitative performance. Finally children were on average 2.6 years younger than those tested by Gottfried and Katz (1977). Our predictions were that Aboriginal and white Australian children would perform more imitative responses when they viewed a same, instead of different, race model, and when the model was described as similar to, instead of different from, them.

Another purpose was to investigate under conditions where subject groups are ethnically, culturally and historically distinguishable, possible rival explanations of the similarity effect. With regard to generalization of interpersonal similarities (Stotland, Zander and Natsoulas, 1962) it would be expected that children would imitate more when a same race model was described as similar rather than dissimilar. Secondly, if increased imitation is due to the amount of attention that is paid to a racially, or otherwise, similar model, then recall of a model's behaviour should be more accurate under conditions of ascribed similarity and same race modeling than under ascribed dissimilarity and different race modeling and, possibly, where ascribed and racial similarity are combined.

METHOD

SUBJECTS. The research was carried out in a predominantly Aboriginal and a predominantly white community in the Nothern Territory of Australia. The child observers

were 30 Aboriginal and 30 white Australian girls from the former and latter communites respectively. All Aborigines were of full Aboriginal descent while all white children were of European Australian descent. The Aboriginal community, described by Davidson (1976, 1979), although only about 100km. away from the white township, for various reasons still remains relatively isolated from personal and media contact with larger centres in the Northern Territory. In the white town and its school there is still very little intercultural contact of a personal nature between the two ethnic groups (Merlan, 1976), although a number of Aboriginal childı from two separate encampments on the fringes of town attend the school there. Opportunities for observing, and developing relationships with, Aboriginal and white adults and peers, and the quality of those relationships (see Davidson 1976, 1977) were, therefore, limited by somewhat self-imposed geographic and cultural segregation of the two groups.

The Aboriginal children constituted the entire female population of the infant classes at their school. White children were selected randomly from the infant classes in the white community school. The age range for Aboriginal girls was 5 years 7 months to 8 years 4 months (mean age= 7 years 2 months) while for white girls it was 6 years 2 months to 9 years 1 month (mean age = 7 years 1 month).

THE IMITATION TASK. Toy play was chosen as the method of measuring the children's imitative behaviour, because it did not appear to require the mastery of complex cognitive skills for adequate performance and because there appeared to be no obvious cultural or status bias in the sorts of

responses required from children after observing the model. Five types of toy were selected from those to be found in Northern Territory school classrooms, so that children were generally familiar with each toy and how it operated. Each type included three choices of toy, only one of which would be selected by the model. The toy categories were: jigsaw puzzle or colouring book; balls; "rolla ball" puzzles; musical instruments; books. Separate video tapes were made of an Aboriginal and a white girl model showing the following order: the nominated jigsaw, ball, puzzle, instrument and picture book. The models were the same age and from the same region as observers but were unknown to the latter. They were approximately the same height and weight, looked about 8 years old, were dressed casually, and had no outstanding personal features. Only one model of each race was deemed necessary (see Breyer and May, 1970). The behaviour of the models was indentical in terms of method of entry and exit, method of play, time spent with each toy, order and identity of toys chosen, and verbalizations. Each tape lasted 7 minutes.

The design also included a control group who, instead of viewing one of the model films, saw a 7 minute video tape of Aboriginal and white pre-school children jointly playing on bicycles and trollies in a pre-school playground. Girls were assigned randomly to view either the same race model, different race model or control group film.

SIMILARITY SET. Girls on the modeling condition received either ascribed similarity or dissimilarity descriptions of the models. Because it appeared impossible

to equate the positive or negative valence of activities found in the two quite distinct, and enormously different, lifestyles of the groups, e.g. say wood gathering or food gathering with mother vs. going shopping with mother, the same descriptions pointing out general similarities or dissimilarities were used for Aboriginal and white observers. These general qualities given the model were expressed in terms of : small community vs. big city residence, small vs. large school attendance, public vs. local private transport experiences, and enjoyment of children's activities such as playing with same sex peers, riding bicycles, swimming and picnicing vs. preference for adult activities such as meetings, reading books instead of comics, and dislike of icecream. Questions were asked of the children during the descriptions to emphasize similarities and dissimilarities, and to ensure that they attended to the instructions.

PROCEDURE AND SCORING. Testing was carried out by the white, female experimenter using school English in unused classrooms at the two schools. Each child in the modeling conditions, upon entering, was told that she would see a film of a little girl playing with some toys and would then be questioned about it, but that she would be told some things about the little girl before she viewed the film. The similarity set was then read and was followed by the film shown on a 30cm black and white portable television monitor. Children were seated directly in front of the monitor at a distance of 1m. from the screen. The toys, described earlier, were placed in five clusters about 2m.

behind the child. A small table and chair were placed near to the toys so that children could sit on the floor or at the table to do the less strenuous activities. The experimenter sat at a small table about 1.5m. to the left of the monitor while the videotape was in progress and during the play session. At the conclusion of the film children were instructed to play with the toys while the experimenter prepared her questions. The experimenter, using a check list, then recorded each toy played with and the order and manner in which play proceeded. After 5 minutes, the child was told to finish p) ing and to join the experimenter at the table. She was then asked three questions to test her recall of the model's performance: What did the little girl play with in the film? What did the little girl say? Was the little girl black or white? The procedure for the control group was exactly the same as the experimental groups, except that they did not receive any similarity set instructions. Two imitation performance and two recall measures were derived from the records of observation. The first modeling measure was the number of model toys played with, irrespective of the number of times the toy was selected (0-5). The second was based on children's imitation of the model's manner of play, with the five most outstanding characteristics of the model's verbal and nonverbal play with each toy receiving a score of one, irrespective of whether it occured with model toys or non-model toys of the same type, and with each behaviour being scored once (0-25). Children received a score only if they imitated the model behaviour precisely.

Two measures of recall were chosen for final analysis. They were number of model toys recalled (0-5) and number of non-model toys volunteered (0-10). On the question of verbalizations, 28 children scored 0 and 22 scored 1 out of a possible recall score of 4 (see Breyer and May, 1970, particularly p.644). Only one Aboriginal child who received the white model - dissimilar instruction recalled the race of model incorrectly, as "half caste".

RESULTS

Tests of comparison of the controls with separate experimental conditions, using the solution suggested by Himmelfarb (1975) were made against the within - cell $\frac{MS}{error}$ obtained from the one-way analysis of variance of two control and eight experimental conditions. Means, SDs and statistically reliable differences between the control and experimental conditions according to Dunnett (1955), are shown for the two imitation (Table 1) and two recall (Table 2) measures.

Insert Tables 1 and 2 about here

Table 1 shows that, except for the condition in which the dissimilar, white model was viewed by the Aboriginal children, all experimental conditions differed significantly from the control group of similar race on the number of model toys used during the play session. For model behaviours imitated four of the eight treatment groups differed significantly from their respective control groups. Data were analysed separately for model toys chosen and model behaviours imitated using 2^3 factorial

analyses of variance (race of child x race of model x similarity set). For model toys chosen the effect of similarity set was reliable, $F(1,40) = 4.31$, $p < .05$. Children who were told that the model was similar to themselves used significantly more model toys than those who were told that the model was different from themselves. The interaction between race of child and race of model was marginally significant, $F(1,40) = 3.36$, $p < .10$. Although not strictly appropriate here, but in view of the findings of Davidson (1979) on acquiescence to same and different race models, tests of the race of model effect for race of subject were performed. Aborigines used significantly more model toys when they observed an Aboriginal model than when they observed a white model, $F(1,40) = 4.32$, $p < .05$. White children played with more model toys when they saw the white model instead of the Aboriginal model but the difference was not significant. White children used significantly more model toys than Aboriginal children, after viewing the white model, $F(1,40) = 4.32$, $p < .05$.

For imitation of model behaviours, similarity set was again reliable, $F(1,40) = 4.04$ $p = .050$ and in the expected direction. The race of observer x race of model interaction was highly reliable, $F(1,40) = 9.37$, $p < .01$. Aborigines imitated significantly more model behaviours when they observed the Aboriginal model rather than the white model, $F(1,40) = 8.52$, $p < .01$. White children imitated more behaviours performed by the white model than did Aboriginal children, $F(1,40) = 6.16$, $p < .05$. No other effects reached significance.

Similar 2^3 analyses of variance were performed separately for recall of toys used by the model (toys correctly recalled) and recall of those not used by the model (errors). White children recalled more model toys than Aborigines, $F(1,40) = 6.00$, $p < .05$, and fewer non-model toys than Aborigines, $F(1,40) = 14.64$, $p < .001$. Irrespective of race, children volunteered significantly fewer non-model toys (made fewer errors) when the model was described as similar rather than dissimilar, $F(1,40) = 8.86$, $p < .01$. The first order interaction, race of child x similarity set, was reliable also for non-model toys, $F(1,40) = 7.25$, $p < .05$. Aboriginal children under similarity set conditions volunteered fewer non-model toys than those under dissimilarity set conditions, $F(1,40) = 15.63$, $p < .001$. Aborigines made significantly more errors than whites when viewing the dissimilar model, $F(1,40) = 21.27$, $p < .05$, but not the similar model.

DISCUSSION

When a child model, irrespective of race, is imbued with similar characteristics and past experiences as a peer observer, greater imitation of the model's behaviour occurs. This experiment, unlike that by Bussey and Perry (1976) where there was explicit reinforcement of the model's and observer's behaviour, defined similarity as past enjoyable or rewarding experiences shared by the model and observer. In these circumstances, in terms of social learning principles, greater imitation of the similar rather than dissimilar model may be explained in terms of anticipated outcomes of

toy play, these possibly being associated expectancies of enjoyment from toy play similar to the model. There were also less mistakes in recalling the model's choice of toy under similarity set conditions, indicating that children possibly paid greater attention to the detailed choices of the similar model but not the dissimilar model (Kagan, 1967, Rosekrans, 1967; Gottfried and Katz, 1977). Similarity effects on imitation and recall were not enhanced by model - observer racial similarity (Bussey and Perry, 1976; Gottfried and Katz, 1977).

The data contain evidence for same-race imitation effects. Derived from research with two groups of children, whose cultural and racial origins are decidedly different and whose experiences of cross-race modeling are similarly limited, this finding is not consistent with results of the majority of studies of American black and white children who share aspects of a common majority culture and experiences in a common schooling system. However, analyses of contrasts within the first- order effects revealed that same race imitation effects were reliable on both imitation measures only for Aborigines. Additionally the white model elicited significantly less imitation from Aboriginal than from white observers. Thus it appears that same-race imitation is a salient feature of Aborigines' but not white Australians' behaviour. This is consistent with the findings of Davidson (1979), and knowledge of Aboriginal socialization experiences: great emphasis on observational learning styles in traditional education; specific past histories of contact with Aboriginal and white models; and the inappropriateness

of white standards and consequences for determining Aboriginal behaviour standards (Hamilton, 1970; Davidson, 1977). White children's behaviour, however, did not differ significantly when they viewed an Aboriginal instead of a white model. It is difficult to imagine the kind of reinforcement whites might have anticipated from imitating the model when she was Aboriginal. Race relations in the white town are still based on the premise of white supremacy which is firmly entrenched in the minds and lifestyles of Aboriginal and white residents (see Merlan, 1976). It is therefore improbable that white children would have a history of reward for imitating their Aboriginal peers. Two levels of speculation are possible. For example, white children might have set standards of self-reward or have imagined that they would be vicariously rewarded by the experimenter for performing better than an Aboriginal peer, better meaning here actually doing the same thing as the Aboriginal model as precisely as possible. On the other hand, the difference in same race imitation between Aborigines and whites may, in itself, be a cultural difference, mirroring the selectiveness of observational learning styles in the particular society, and possibly a degree of inflexibility in cultural reinforcement history. The finding that Aborigines and whites differentially recalled more accurately the behaviour of a model, said to be similar rather than dissimilar, is not inimical to this latter interpretation although there was no same race effect on recall. This aspect of differential imitation may be worth examining with other specifically non-western groups.

Aborigines' recall generally was poorer than whites'. This is a common outcome of cross-cultural studies of memory (see Cole and Scribner, 1977). Whether it is due to adoption of a different answering style (see Goodnow, 1976) or to a production deficiency (Flavell, 1970), it is probably more useful in this case to adopt a relative performance analysis suggested by Poortinga (1971) and focus on the experimentally manipulated variables and interaction effects rather than the absolute racial difference. Despite these differences most groups were remarkably accurate in remembering which toys the model played with. In fact, there exists a possible ceiling effect on recall of model toy scores which may have concealed reliable results on the similarity set and first order interactions.

References

Adams, G.R. An investigation of differential reinforced imitation training on imitative behaviour. The Journal of Genetic Psychology, 1974, 124, 221 - 233.

Bandura, A. Principles of behaviour modification. New York: Holt, Rinehart and Winston, 1969.

Breyer, N.L., & May, J.G. Jr. Effect of sex and race of the observer and model on imitation learning. Psychological Reports, 1970, 27, 639 - 646.

Burnstein, E., Stotland, E., & Zander, A. Similarity to a model and self-evaluation. Journal of Abnormal and Social Psychology, 1961, 52, 257 - 264.

Bussey, K., & Perry, D.G. Sharing reinforcement contingencies with a model: A social - learning analysis of similarity effects in imitation research. Journal of Personality and Social Psychology, 1976, 34, 1168 - 1176.

Cole, M., & Scribner, S. Cross-cultural studies of memory and cognition. In R.V. Kail & J.W. Hagen (Eds.), Perspectives on the development of memory and cognition. New York: John Wiley, 1977.

Cook, H., & Smothergill, D.W. Racial and sex determinants of imitative performance and knowledge in young children. Journal of Educational Psychology, 1973, 65, 211 - 215.

Davidson G.R. Culture learning through caretaker - child interchange behaviour in an Australian Aboriginal community. Unpublished PhD thesis, University of Queensland Library, Brisbane, Australia, 1976.

Davidson, G.R. Teaching and learning in an Aboriginal community. Developing Education, 1977, 4(4), 2-8.

Davidson, G.R. Racial characteristics and experimental performance: Measuring the effects. Journal of Cross-Cultural Psychology, 1979, 10, 111-122

Dunnett, C.W. A multiple comparison precedure for comparing several treatments with a control. Journal of the American Statistical Association, 1955, 50, 1096 - 1121.

Eaton, W.A., & Clore, G.L. Interracial imitation at a summer camp. Journal of Personality and Social Psychology, 1975, 32,1099 - 1105.

Flavell, J.H. Developmental studies of mediated memory. In H.W. Reese & L.P. Lipsitt (Eds.), Advances in child development and behaviour. Vol 5. New York: Academic Press, 1970.

Gable, P., & Heckel,R.V. The effect of race and apparent reward magnitude on modeling behaviour in black and white children. Journal of Clinical Psychology, 1974, 30, 223 - 225.

Goodnow, J.J. Some sources of cultural differences in performance.. In G.E. Kearney & D.W. McElwain (Eds.), Aboriginal cognition:Retrospect and prospect. New Jersey: Humanities Press, 1977.

Gottfried, A.E., & Katz, P.A. Influence of belief, race and sex similarities between child observers and models on attitudes and observational learning. Child Development, 1977, 48, 1395 - 1400.

Grusec, J. E. , & Brinker, D.B. Jr. Reinforcement for imitation as a social learning determinant with implications for

sex-role development. Journal of Personality and Social Psychology, 1972, 21, 149-158.

Hamilton, A. Nature and nurture: Child rearing in North-central Arnhem Land. Unpublished M.A. thesis, University of Sydney Library, Sydney, Australia, 1970.

Hartup, W.W., & Coates, B. Imitation of a peer as a function of reinforcement from a peer group and rewardingness of the model. Child Development, 1967, 38, 1003-1016.

Harvey, O.J., & Rutherford, J. Status in the informal group: Influence and influencability at differing age levels Child Development, 1960, 31, 377-385.

Himmelfarb, S. What do you do when the control group doesn't fit into the factorial design. Psychological Bulletin, 1975, 82, 363 - 368.

Holland, S.H. The influence of black versus white models on the imitative behaviour of black inner-city elementary school-aged children. Unpublished Ph.D. thesis, Columbia University, 1976.

Kagan, J. On the need for relativism. American Psychologist, 1967, 22, 131 - 142.

Lefkowitz, M., Blake,R.R., & Mouton, J.S. Status factors in pedestrian violation of traffic signals. Journal of Abnormal and Social Psychology, 1955, 51, 704 - 706.

Lott, K.P., Jr. Development of differential imitation: A study of the relationship between race of models versus age and race of observers. Dissertation Abstracts International, 1973, 33 (7-B), 3286 - 3287.

Maccoby, E.E., & Wilson, W.C. Identification and observational learning from films. Journal of Abnormal and Social

Psychology, 1957, 55, 76-87.

Merlan, F. Summary report on field work. Australian Institute of Aboriginal Studies Newsletter, 1976,6 (June), 8 - 10 (N.S.)

Poortinga, Y.H. Cross - cultural comparison of maximum performance tests: some methodological aspects and some experiments with simple auditory and visual stimuli. Psychologia Africana Monographs, 1971, No. 6

Rosekrans, M.A. Imitation in children as a function of perceived similarity to a social model and vicarious reinforcement. Journal of Personality and Social Psychology, 1967, 7, 307 - 315.

Simms, S.A. Effects of modeling processes and resources on sharing among black children. Psychological Reports, 1978, 43, 463 - 473.

Stotland, E., & Patchen, M. Identification and change in prejudice and authoritarianism. Journal of Abnormal and Social Psychology, 1962, 61, 250 - 256.

Stotland, E., Zander, A., & Natsoulas, T. Generalization of interpersonal similarity. Journal of Abnormal and Social Psychology, 1962, 61, 250 - 256.

Thelen, M.H. The effect of subject race, model race and vicarious praise on vicarious learning. Child Development, 1971, 42, 972 - 977.

Thelen, M.H., & Fryrear, J.L.Effect of observer and model race on the imitation of standards of self reward. Developmental Psychology, 1971, 5, 133-135.

Thelen, M.H., & Soltz, W. The effect of vicarious reinforcement on imitation in two social-racial groups. Child Development, 1969, 40, 879 - 887.

TABLE I

Means, SDs and control-treatment differences for eight experimental and two control conditions for number of model toys used and model behaviours imitated.

White observers			Aboriginal observers		
Condition	$\bar{X}$	SD	Condition	$\bar{X}$	SD
TOYS					
Aboriginal model			Aboriginal model		
Similar (n=6)	4.00*	1.00	Similar(n=6)	4.33*	1.11
Dissimilar (n=6)	2.83*	.69	Dissimilar(n=6)	3.00*	1.42
White model			White model		
Similar (n=6)	3.50*	1.61	Similar (n=6)	3.00*	.58
Dissimilar(n=6)	3.83*	.90	Dissimilar(n=6)	2.33	.94
Control (n=6)	1.16	.69	Control (n=6)	1.16	.69
BEHAVIOURS					
Aboriginal model			Aboriginal model		
Similar	7.66*	3.90	Similar	10.33*	5.31
Dissimilar	6.00	2.08	Dissimilar	7.50	4.35
White model			White model		
Similar	8.66*	4.06	Similar	6.33	3.99
Dissimilar	8.16*	3.39	Dissimilar	4.83	2.55
Control	2.33	1.89	Control	2.33	1.11

* $\bar{X}$ Exp. - $\bar{X}$ Cont. Sig. $p < .05$

TABLE 2

Means and SDs for eight experimental conditions on recall of model toys and non-model toys (errors).

White observers			Aboriginal observers		
Condition	$\bar{X}$	SD	Condition	$\bar{X}$	SD
MODEL TOYS RECALLED					
Aboriginal model			Aboriginal model		
Similar	4.83	.35	Similar	4.83	.37
Dissimilar	4.50	.50	Dissimilar	3.83	.69
White model			White model		
Similar	4.50	.76	Similar	4.16	.90
Dissimilar	4.83	.37	Dissimilar	3.83	.90
NON-MODEL TOYS RECALLED					
Aboriginal model			Aboriginal model		
Similar	.17	.37	Similar	.50	.76
Dissimilar	.33	.47	Dissimilar	1.67	.75
White model			White model		
Similar	.17	.37	Similar	.50	.50
Dissimilar	.17	.37	Dissimilar	2.67	2.21