

THE ECOLOGY OF ENVIRONMENTAL MEMORY

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Introduction

This paper reviews the conclusions of Edith Cobb in her book and article of the same name, The Ecology of Imagination in Childhood (Cobb, 1959, 1977). Cobb's work remains a rare attempt to explicate an elusively intangible but perhaps profoundly formative aspect of childhood: our early sense of the surrounding physical world. It constitutes almost the first systematic reflection on this subject outside of psychoanalytic attempts to link object relations theory to general world feelings (Erikson, 1950; Searles, 1960; Winnicott, 1971). The qualified "almost" is necessary; because Cobb was systematic in the sense that she did extensive sustained research, but unsystematic in the sense that she never reported how she did it. She received a degree from the New York School of Social Work in 1948, and she was patroness and friend of a number of intellectuals, including Margaret Mead. Yet her work remains manifestly the product of what she was by birth: a committed amateur of independent means. It displays the fervent *idée fixe* of an amateur, but also a failure to subordinate this fervor to the discipline of method.

Nevertheless, for its position as the first "systematic" study of environmental autobiography, for its eloquent elaboration of its subject, and for its influence, Cobb's work must be taken seriously. Anthropologists, landscape architects, geographers, psychologists, and artists who have pondered the influence of early environmental experience have repeatedly cited her (Blazer, 1973; Hart, 1979; Mead, 1977; Moore & Young, 1978; Moore, 1986). This paper reports an attempt to submit Cobb's work to a methodological reevaluation.

Cobb's conclusions were based upon what she described as "my collection of some 300 volumes of autobiographical recollections of their childhood by creative thinkers from many cultures and eras" (1959, p. 539). The back of her book lists 313 such volumes which she deeded to the library at Columbia Teacher's College. In addition, she spent many hours recording children at play in the process of earning her social work degree. Unfortunately, what children she observed, under what conditions, she never specified--just as she never specified how she selected the books which she read. It is likely that the basis of her selection was her preference. As autobiographies go, her collection predominantly records nineteenth century European childhoods by authors who made their name in some field of the arts. Yet from this sample she drew conclusions which she claimed to be universal. Her major conclusions are embodied in the following quotations.

"Creative thinkers" say that it is principally to the middle years of childhood that "they return in memory to renew the power and impulse to create at its very source, a source which they describe as the experience of emerging not only into the light of consciousness but into a living sense of a dynamic relationship with the outer world" (1959, p. 539).

Childhood is "the biological phase in each life during which the most actively creative learning takes place." Therefore from "the ecology of imagination in childhood," from "the child's evolving ability to learn, think and create meaning in his perceived world," "all later creative activities evolve." (1977, p. 17-18).

For the above reasons, genius is "an evolutionary phenomenon, at biocultural levels, beginning with the natural genius of childhood and the 'spirit of place'" (p. 44).

For this author, Cobb's work has raised more questions than it has answered. Are her conclusions as universal as she believed? The autobiographies she drew upon are recollections of people, periods, and places that have for the most part vanished. Since the nineteenth century which they record, the world has drastically altered. Do creative thinkers still harbor formative environmental memories such as she described? What, anyway, did she mean by creative thinkers? She cites poets, novelists, and painters. What about the people who apply their talents to business, politics, or the physical sciences? What about the myriad array of "ordinary" people? To gain insight into these questions, this study compared Cobb's conclusions to a smaller, but more diverse, collection of twentieth century autobiographies.

RESEARCH DESIGN AND ISSUES

To reconsider Cobb's conclusions, it is appropriate to turn to the same source of information which she probed herself: published autobiography. A new, more varied collection of autobiographies was assembled, which differed from her own collection in the following ways.

1. All authors were born in the twentieth century.
2. Urban and rural experience was balanced. One-third of the authors grew up in cities (N=13), one-third of the authors grew up in the country or small towns (13), and one-third moved between the city and the country (12).
3. The authors represented diverse professions. (See Table 1 for a breakdown of professions.)

Within these requirements, selection was as random as possible. To avoid choice according to personal preference, autobiographies in the fields of science and public life were taken as they were found in university and public library collections. Autobiographies by artists abounded to the degree that selection was necessary. In this case, the criterion was to include as great a diversity of environmental backgrounds and areas of artistic achievement as possible.

A total of 38 books was gathered (see list at the end of this paper). This number falls far short of Cobb's 313. The purpose of this study, however, was not to generate theory, but to test the limits of existing theory. To this end, even one anomolous autobiography would be enough to call previous conclusions into question. If all 38 books conformed to the pattern Cobb described, then her claim to speak universally would be that much vindicated. If differing environmental experiences emerged, however, then

Table 1

Professions Represented in a Collection
of Twentieth Century Autobiographies

Profession	Number (N=38)	Percent of Total
Art & Religion (poetry, prose, the fine arts, music, dance, the ministry)	15	39
Science & Technology (mathematics, physical science social science, medicine, aviation)	10	26
Public Life (law, politics, journalism)	13	34
	<hr style="width: 50px; margin: 0 auto;"/> 38	<hr style="width: 50px; margin: 0 auto;"/> 100

the contexts of experiences would have to be examined. The purpose of this study dictated a detailed comparison of environmental passages in a few books.

Before the method of analysis is summarized, some cautions regarding autobiographical research are in order. No less than Cobb, this researcher desired to speak as inclusively as possible about the influence of childhood memories. Counter to this intention is the nature of autobiography itself.

The first limitation of autobiography is that it is a Western genre. It manifests a tradition of individualism and self-examination which is peculiarly Western. When it appears in the Eastern and Southern hemispheres, it is evidence of intellectual colonization. It is a medium for the study of Western experience only (Gusdorf, 1980).

Another limitation is that only someone skilled at writing can practice this art. Most autobiographers have won their way in the world in whole or in part by their pen: poets, novelists, journalists, lawyer, politicians, scientists, ministers. Thirty-two of the 38 authors in this sample (84%) were from these fields. Therefore dancers, musicians, painters, and actors remain underrepresented, despite a search for their work, and not a single autobiography by a businessman or unskilled laborer could be found. Merely to have written a published autobiography makes a person distinctive. It suggests that one is unusually literate, self-reflective, and leisured.

The goal of diversity was frustrated in another way. The intention at the outset was to balance autobiographies by men and by women. Traditional barriers against women in science, politics, and journalism, however, were attested to by their silence and absence in these fields. As a result, the total number of books by women in the sample was small (11 out of 38), so that no gender comparisons were possible.

Any research based upon published autobiographies must be qualified by these limitations. Nevertheless, autobiography remains an invaluable source of insight into experience. The very eloquence that sets these writers apart permits them to express situations and feelings which a larger audience has shared. Without the element of recognition, there could be no sympathetic reading of autobiography; and it remains a perennially popular genre. There may be other ways that people remember places, beyond those commemorated in autobiographies. Yet the study of autobiography remains one valid way to read the enduring imprint that early experience leaves.

As a first step in this project, each book was read in its entirety by this researcher. After only a few books, the question which initiated this study was answered. Would all of these authors draw upon environmental memories such as Cobb described? All of these writers were "creative thinkers" in their fields. Therefore all of them should reveal memories that conformed to Cobb's pattern. What was found was that some authors did; but some did not.

Therefore an alternate question came to the forefront:

In addition to the type of memory that Cobb described, what other types of environmental memory emerge?

Related to this question was another:

Are particular types of people or places consistently associated with particular types of memories?

To answer these two questions, this study required two phases. To derive different types of memory and to assemble their definitions, it began with a descriptive phenomenological phase, according to the method of text

interpretation summarized by Colaizzi (1978). To discover the correlates of different experiences, Glaser and Strauss's constant comparative method for the analysis of qualitative data was used (Glaser & Strauss, 1967). In this process, as material of interest is gathered, it is coded into as many categories of analysis as possible, as categories suggest themselves to the researcher. All of the material that is coded for one category is then compared, in order to generate the properties of each category.

To achieve these ends, this study advanced according to the following sequence of steps.

To acquire familiarity with the books and to lay the groundwork for their analysis, two preliminary steps were required. 1) To begin, as each book was read, photocopies were made of all passages which described early environments, environmental responses, or reflections regarding the significance of early environmental experience. Relevant events were also noted: for example, the death of a father which forced relocation, a mother's plant lore, the writing of youthful nature poetry. 2) After all books were read, their contents were brought freshly to mind by rereading all highlighted passages.

After these preliminary steps, the next step was to categorize the contexts of environmental encounters. Through the process of constant comparison which Glaser and Strauss advocate, six contextual categories emerged as important to consider.

1. Location
 - . urban-suburban
 - . rural-small town
2. Economic status
 - . appropriation (family, community, or wild land)
 - . marginality (precariously rented or trespassed upon property)
3. Social setting
 - . solitude
 - . companionship
4. Rules
 - . Freedom, spontaneity
 - . Supervision, constraint
5. Evaluation
 - . Setting valued by society at large
 - . Setting devalued by society at large
6. Age at time of encounter
 - . Early or middle childhood
 - . Adolescence

At this point, an analysis sheet was prepared to record authors' environmental descriptions, responses, and reflections. This step was fine grained and time consuming. Therefore it was reserved for passages which involved strong environmental feeling. All descriptions of the home and other primary places were included. For each passage, key words and phrases were copied down and appropriate contextual categories were checked off.

To ensure that this analysis did not depend upon private idiosyncratic insights, three independent readers prepared analyses using written directions. Their sheets showed basic agreement regarding major descriptive terms, behavioral and emotional responses, and contextual categories.

During all the preceding steps, different types of environmental memory were being discovered, distinguished by the feelings that they evoked. At this point seven forms of memory were named and defined. They will be discussed in the next section. Each analysis sheet was then reviewed, and the dominant form of memory represented was written across the top.

The three readers who had tested the replicability of the previous stage tested the replicability of this stage also. Each matched definitions of the seven types of memory to ten autobiographical passages. The coefficient of interjudge agreement among these three independent judges and this researcher was .92 (computed according to Holsti, 1969, p. 137).

The final step was to compare each type of memory to its context. Some clear, unequivocal contextual patterns emerged.

FINDINGS

In attending to the voices of these 38 books, 38 variations on the theme of environmental memory were heard. It is the poignant dilemma of qualitative research that, at some point, it must abandon deference to each unique life, to each unique experience, and begin to generalize. At just this point, however, excitement begins, as similar responses emerge under similar conditions, as intuition generates anticipations, and examination bears them out.

One irrefutable observation of this study is that the type of remembered environmental encounter which Cobb stated to be universal did not universally appear: "the experience of emerging...into a living sense of a dynamic relationship with the outer world." That this experience is not always recorded--even that it is not always remembered--is not conclusive evidence that it does not always occur. Yet when it was found, its declaration was without exception so intense, that it is difficult to believe that, once felt, it could ever be forgotten or treated as insignificant. At best, Cobb's theory must be amended to allow for two different degrees of experience. It is possible that, in a very general--and therefore weak--sense, all children's developing consciousness of the world involves this dynamic sense of relationship with their place. Only in some children, however, is this experience so intense that it burns itself into memory to animate adult life.

In addition to this type of memory that Cobb delineated, six other forms of memory appeared. In Table 2, all seven forms of memory are defined.

Three generalizations can be made regarding the autobiographical passages represented in Table 2. As the literature on autobiographical memory would predict, few memories antedated six or seven years of age, and those that did were momentary fragments, unconnected to each

Table 2

Seven Forms of Environmental Memory
in Twentieth Century Autobiography

1. Transcendence. Memory of a dynamic relationship with the outer world, of a profound continuity with natural processes. It transcends social consciousness through a feeling of one-to-one communion with the environment. It often inspires long descriptions richly evocative of all five senses, detailing everything in the setting. Most commonly, it involves elation, a sense of exuberance or enveloping calm, of timelessness, boundlessness, and radiance. Occasionally, fatalism must be distinguished: a chilling, searing glimpse of nature's monstrousness which consumes life as prodigally as it creates it.
 2. Affection. Memory of places to which we trace our roots, which are associated with happiness and security. It incorporates social definitions of the environment, and there is a parallel between the warmth of feeling for the place and for the people in it. Catalogues of everything in the setting are common.
 3. Ambivalence. Ambivalence results when identification with the place in which one is rooted is complicated by the tension that it represents family weaknesses or social injustices. Often the dominant culture devalues this place. It cannot be rejected because it is where one's personality and perspective developed and there are ties of affection to it, but neither can it be comfortably embraced.
 4. Idealization. The person identifies with an environmental abstraction rather than a concretely live-in place. It may be a geographic region, as in patriotism, or a realm of the imagination. This mentally inhabited world becomes an intensely felt symbol for personal desires and values.
 5. Rejection. The environment represents a place to escape from. It fails to meet basic needs. It may be rejected for what it actively contains--because it is dangerous, filthy, or chaotic, or for what it lacks--because it is barren or unchallenging or foreign and alienating.
 6. Detachment. Detachment occurs when few words or feelings are invested in environmental description. The environment is referred to in order to locate life events in time and space, but it is a flat backdrop in scenes in which the actors occupy center stage.
 7. Omission. The physical setting is not described at all. The location of events must be inferred from scattered allusions.
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other or to any larger context of meaning (cf. Campbell & Spear, 1972; Dudycha & Dudycha, 1933; Neisser, 1962; Schachtel, 1959; Waldfogel, 1948). It is also notable that memories of exciting places predominated. Intense experience--rather than repetitive experience--characterized most memories (cf. Kleinsmith & Kaplan, 1963; Robinson, 1980). An observation which may be related is that outdoor places were remembered out of all proportion to the relative number of hours spent there. A sampling of all the settings referred to revealed that outdoor settings exceeded interiors by a ratio of about 4:1 (cf. Cooper, 1978).

Table 2 presents environmental memories out of context. Crystallized in definitions, these memories have been abstracted from the identities, events, and social relationships in which they are embedded in the autobiographies--like words in a dictionary that have been abstracted from sentences. Table 3 begins to reconstruct the grammar of memory. Under each type of memory, it lists the significant contexts in which it occurred.

Table 3 is based upon a total of 68 different cases of environmental response which the 38 authors in this sample described as a whole. Over the span of childhood and youth, authors encountered diverse environments. They roamed, they visited, they moved. They reacted to different places in different ways. Only 15 authors recorded a single form of environmental response. Sixteen recorded two different types of response; and seven recorded three.

Remarkably unambiguous associations were discovered. Certain types of memory occurred under certain conditions with a lawful regularity. The contexts of each type of memory are reviewed here.

1. Transcendence. All accounts of transcendence showed essential resemblance to the experience which Cobb described: intense responsiveness to the environment and identification with it; a sense of relationship with nature as process; and enduring inspiration. It occurred within a context so constant that it appeared inflexible: freedom,

Table 3

Recurring Social and Physical
Contexts of Environmental Memory

Forms of Environmental Memory	Recurring contexts, ranked in order of frequency					
Transcendence (N=15)*	Economic security (15)	Freedom (14/14)*	Artistic profession or avocation (14)	Solitude (12/14)	Valued place (9/11)	Rural place (11)
Affection (N=18)	Economic security (18)	With others (18)	Valued place (18)			
Ambivalence (N=3)	Marginality (3)	With others (3)	Devalued place (3)			
Idealization (N=3)	Adolescence (3)	Valued placed (3)				
Rejection (N=11)	Adolescence (10)	Economic security (9)				
Detachment (N=7)	With others (7)	Economic security (6)	City (5)			
Omission	City (10)	Economic security (9/10)	Scientific profession (7)			

*N = number of cases of given form of memory, out of a total of 68 cases recorded by 38 autobiographers

**When a value cannot be defined in every case, the ration of cases of this value to the number of cases for which information is available is given in parenthesis.

solitude, and an opportunity to feel that the environment was one's own, reported by someone with some involvement in the arts. Another condition was almost invariable: a natural environment.

Freedom is the key word which summarizes the conditions of transcendence in childhood. The environments described opened around the child, beckoning fascinatingly, offering freedom to move and explore. Perhaps the natural environment was usually implicated because it is free in this sense. The three urban environments which were described were accessible, inviting versions of such a setting: Santiago and London in the 1920s (Pablo Neruda, C. Day Lewis) and San Francisco in the 1940s (Maya Angelou).

Other conditions of transcendence--solitude and an opportunity to consider the environment one's own--may be interpreted as different dimensions of freedom. A child

alone is not only free from surveillance and control, but also free from distraction--free to focus full attention upon its surroundings. A child on family land, public land, or wild land enjoys freedom to lay claim, to make a place its "own," to touch and explore without fear of transgression.

Nine of the 15 who reported this experience were artists by vocation during all or part of their lives (Maya Angelou, Elias Canetti, Barbara Hepworth, C. Day Lewis, Pablo Neruda, Sheila Scott, Stephen Spender, Phyllis Theroux, Yevgeny Yevtushenko). Five of the remaining six were committed amateurs, who painted, wrote poetry or short stories, or avidly patronized literature and the performing arts (Erwin Chargaff, Milovan Djilas, Loren Eiseley, Richard Selzer, Howard Thurman).

Cobb ignored encounters with nature which bring not joy, but a premonition of death; but her description of

transcendence must be extended to include this mood. It is noteworthy that the three authors who remembered "this searing inner vision" were men whose careers reinforced a consciousness of human finitude (Erwin Chargaff, a biochemist; Loren Eiseley, a paleoanthropologist; and Richard Selzer, a surgeon). In contrast to ecstatic memories, intimations of mortality were experienced not only when these authors were alone, but also when they were in a band of boys exploring dangerous places forbidden by their parents.

2. Affection. Affection saturates memories of places where one was happy and comfortable, secure and well loved. It manifests the sense that "This is my place in the world," whenever that place is gladly embraced. In this study, it was always associated with places that were valued by the adults around the child as well as by the child itself. Eighteen authors revealed memories of this kind.

There are points of similarity between affection and transcendence. Like transcendence, affection conveys a sense of rootedness, a sense of ownership and belonging, in a place which is congenial rather than confining. Affectionate as well as transcendent memories were filled with images of physical movement, explorations, and discovery in places that children appropriated as their own. There was also freedom in the sense that the settings were either family property, or rented or public property where the family enjoyed secure social standing.

What distinguishes affection from transcendence is its social embeddedness. In this case, the feeling that "This is my place in the world" signifies social position as much as physical location. Transcendence, as its name implies, transcends social consciousness through an identification with universal order. Affectionate memories lovingly conserve human affiliations.

In keeping with this distinction, affection was predominantly associated with exploration in and around the home rather than outdoors, and with companionship rather than solitude. Urban and suburban environments were described twice as often as rural environment, and there were many descriptions of interiors. Whether the child was free, or kept under the watchful eye of others and hedged in with rules, did not seem to matter. Instead of the solitary "I" which expressed transcendence, descriptions were transmuted through the words "we" and "our".

A literary style which may be termed "inventory" was a hallmark of this type of memory. It is the loving listing of every item in the environment. Sometimes, like transcendence, affection inspired the skillful evocation of all five senses. At other times, this listing consisted of simple naming. It was as if authors aspired to preserve every part of a loved environment through the magic of naming it. Perhaps, in recalling a setting in such detail, the underlying hope was to call up from the grave of time the loved people associated with it. Correspondingly, affection easily slipped into nostalgia.

3. Ambivalence. Ambivalence may be described as affection gone awry. In these memories too, the environment is associated with family affection. Identification with one's place is undeniable. It is where, in coming to know the world, one has come to know oneself. For better or for

worse, it is one's roots. From an early age, however, the child begins to realize that its home and surroundings are devalued by society at large. The dilemma is how to resolve identification with this setting in a society which denies it value.

Three authors expressed ambivalence. In each case, the family's economic and social relationship to the land was precarious. Two were children of socially marginal city tenants, alert to their parents' fear of the landlord (Claude Brown, John Holloway). One belonged to a mountain peasant family intimate with hunger and dirt, who lived under the wartime threat that the little that they had might vanish at any moment (Milovan Djilas).

Another characteristic of each account was entrapment within this environment. There were no alternatives: no summer escapes, no promise of a better place in the future. Each author described a developing awareness of his parents' ignorance and vulnerability, and of his home's shabbiness. But there is tenderness in each description also. It is their self that they are handling, so they must handle it gently.

4. Idealization. In idealized memories, identification with a place is fervently real; but the place itself is an ideal more than a reality. It is not remembered concretely in itself, but as a symbol of historical, cultural, religious, or racial ideals. Idealization appeared in adolescence in this sample, as the development of abstract, formal operational thought in adolescence would predict.

The three authors who expressed this type of memory exemplified three different ways in which a place may be idealized. a) It may be known, but not noticed in itself. For example, Bobby Seale identified nature with blacks as fellow victims of the white man, and in the name of both he frequented the Berkeley Hills behind his home. The turmoil of his associations seemed to block openness to the nature, he never describes any actual setting. b) In the second case, the place may be a generalization which transcends its parts. Such was Hans Selye's patriotism for his homeland Hungary, when it was being dismembered as a spoil of war. c) In the third case, a place may never be known in reality at all. Abba Ebban's Zion existed only as aspiration. It was a dream; but in contrast to the English worlds of his school and home, which he said "could exist without me--and I without them," he lived this dream domain "on an intimate level of personal experience" (Ebban, 1977, p.7).

Despite the absence of specific places in idealized memories, place remains central to the author's identity.

5. Rejection. For 11 authors, the environment came to represent a place to escape from. Two reasons for this mismatch appeared: Sometimes the environment embodied a system of injustice: for example, the Harlem and Oakland ghettos of Claude Brown and Bobby Seale, or the boarding school where young Stephen Spender was tormented by homesickness and classmates' teasing. In most cases, however, the environment simply came to appear too dull, too unchallenging, too confining. In this respect, sterile suburbs failed as well as grimy ghettos. In one case, that of the physicist Freeman Dyson, his graceful native town and seaside summer place simply could not compete for

attention with the more vivid world of his mind.

In 10 out of 11 cases, rejection was not reported until adolescence. It required a vision of alternatives, and adolescence is the period for conceiving of alternatives. Often the same environment which was embraced affectionately in childhood appeared barren in adolescence.

6. Detachment. To some degree, each autobiography showed detachment, when a place was mentioned only in passing in the course of personal history. It was rare as a general mode of environmental description, however. As a rule, authors either omitted the environment altogether or associated it with strong positive or negative emotions. No common explanation for detachment could be found. It may be notable that four out of the seven authors who showed it were scientists (Otto Frisch, Margaret Mead, Hans Selye, Solly Zukerman); and that two authors traveled so constantly that they barely knew the places that they barely reported (Elias Canetti, Margaret Mead).

7. Omission. The environment is omitted when no direct reference is made to it at all. Readers must piece together the author's location from incidental allusions. The location often remains vague.

Total silence is difficult to discuss. Differing reason for the omission of the environment can be imagined; but when nothing is stated, nothing can be established. Three observations can be made, nevertheless. a) In all 11 cases, it was an urban or town environment. b) It can sometimes be inferred that the environment was disliked. c) Omission appears to be endemic to physical scientists. Five out of six in this sample displayed it. (The remaining physical scientist, Hans Selye, usually showed detachment.) As a group, they had other things than their surroundings on their mind.

Summary

What do these results have to say with regard to the questions that were raised in the introduction to this paper? The answers which they suggest can be briefly summarized.

Question 1. Does the autobiography in general support Edith Cobb's claim that a heightened awareness and sense of relationship with the outer world is a universal experience of childhood?

In terms of the memories which these autobiographies considered it important to record, the answer to this question is an unequivocal no. Less than half of the authors gave examples of transcendence such as Cobb described.

Question 2. Are certain groups of people more likely than others to remember transcendence? Can these people be identified as "creative thinkers"?

The answer to the first part of this question is an unequivocal yes. Fourteen of the 15 authors who recorded this experience were artists by vocation or avocation. For this very reason, however, the answer to the second part of this question must be qualified. Yes, artistic people are

"creative thinkers." But so, in their own way, are the authors in this sample who restricted themselves to mathematics, physics, or politics. It appears that Cobb's theories are primarily relevant to artistic creativity.

Question 3. Does environmental memory vary according to the social context of the experience?

Undisputably. Even in such a seemingly "pure" person-place encounter as transcendence, social and economic variables entered. Critical variables appear to be a family's social and economic relationship to the land, solitude or companionship, and freedom from supervision or constraint. Transcendence seemed to require solitude, freedom, and a sense of belonging in a place. Affection was also associated with a sense of belonging. Ambivalence appeared when the child's family lacked a secure social and economic standing. Idealization and rejection were also related to social identity and social opportunities.

Question 4. Does memory vary according to environmental qualities and opportunities?

Unless this question is qualified by social contexts, the answer is no. The nature of the environment, by itself, was not enough to determine memory. The nature of the child and the nature of the encounter were more important factors. For example, in different books freedom in alluring environments left impressions of transcendence, affection, ambivalence, detachment, or rejection. On the other hand, transcendence could be evoked by environments as small as a patch of weeds at the edge of a sleeping porch (Phyllis Theroux), or during freedom as brief as an escape into solitude during a school outing (Sheila Scott). Similarly, it was impossible to predict any other type of memory based upon environmental opportunity alone.

Environmental opportunity was determinate in a negative sense, however. Transcendence was never reported when a child did not enjoy freedom within an alluring natural or urban environment. Affection never occurred when the environment was not comfortable and secure. Ambivalence never occurred when it was not socially marginal. In other words, the quality of the environmental set limits within which memory was free to vary.

DISCUSSION

In this study, social, economic, and personal factors shaped the form of memory as decisively as physical factors. It has been the argument of environmental psychology since its inception that environmental experience is a three-way interaction of individual, society, and physical place. The results of this study suggest some of the variables that must be considered in an expansion of this three-term formula.

The forms of environmental memory which people in this study cherished, which were integral to their self-identity, conform to the concept of existential insideness which Edward Relph (1976) has elaborated. As he has defined it, it is a sense of belonging to a place, a sense of knowing that this place is where one belongs, a feeling of being part of a place and its being part of oneself.

In this definition, a key word is belonging. Belonging, in turn, may be translated into the terms at-easeness and

appropriation, which David Seamon (1979) has highlighted. These terms accurately convey the social and economic dimensions of place experience which proved decisive in this study.

Transcendence, affection, and, in imagination, idealization were all tied to places where a child felt existential insideness in the sense of at-easeness and appropriation. A child could appropriate these places as "ours," in a climate of love and affection among "us," or as peculiarly "mine" in a state of solitary freedom.

If the economic status of places that were felt to be "ours" or "mine" is reviewed, they prove to be either wild or public land or private family property. Places that a child identified as "theirs" were, by rights of legal possession, somebody else's. Here a child felt the discomfort of an interloper, of someone provisionally tolerated. Then ambivalence or rejection clouded memory.

The word "place," by itself, gives bare location in space. Planning and architecture have focused upon the physical tangibles of places: how they are constructed out of natural topographies and built environments in compliance with human needs. Experience and memory, however, construct the concept "place" out of life as it is lived. They saturate it with all the dimensions of what the phenomenologist Edmund Husserl (1970) has called the "life-world." Critical among these dimensions is appropriation: these sense of "ours," "mine," and "theirs."

If planning and architecture are to serve not only basic needs but enduring experiences, they must explicate and attend to the social and economic intangibles that compose at-easeness and appropriation, as much as to the physical qualities of places. According to the wisdom of autobiography, it is in these terms that places become memorable.

REFERENCES

- Blazer, R. (1973). The fire. In D. Allen & W. Tallman (eds.), Poetics of the new American poetry. New York: Grove Press.
- Campbell, B.A., & Spear, N.E. (1972). Ontogeny of memory. Psychology Review, 79, 215-236.
- Cobb, E. (1959). The ecology of memory in childhood. Daedalus, 88, 537-548.
- Cobb, E. (1977). The ecology of memory in childhood. New York: Columbia University Press.
- Colaizzi, P.F. (1978) Psychological research as the phenomenologist views it. In R.S. Valle & M. King (eds.), Existential-phenomenological alternatives for psychology. New York: Oxford University Press.
- Cooper, C. (1978). Remembrance of landscapes past. Landscape, 22, (3).
- Dudycha, G.J., & Dudycha, M.M. (1933). Some factors and characteristics of childhood memories. Child Development, 4, 265-278.
- Erikson, E. (1950). Childhood and society. New York: W.W. Norton.
- Glaser, B. & Strauss, A.L. (1967). The discovery of grounded theory: Strategies for qualitative research. Chicago: Aldine Publishing Co.
- Gusdorf, G. (1980). The conditions and limits of autobiography. In J. Olney (ed.), Autobiography. Princeton: Princeton University Press.
- Hart, R. (1979). Children's experience of place. New York: Irvington.
- Holsti, O.R. (1969). Content analysis of the social sciences and humanities. Reading, MA: Addison-Wesley.
- Husserl, E. (1970). The crisis of European sciences and transcendental phenomenology, trans. D. Carr. Evanston, IL: Northwestern University Press.
- Kleinsmith, L.J., & Kaplan, S. (1963). Paired-associate learning as a function of arousal and interpolated interval. Journal of Experimental Psychology, 65, 190-193.
- Mead, M. (1977). Children, culture, and Edith Cobb. USDA Forest Service General Technical Report NE-30, 19-24.
- Moore, G. (1985). State of the art in play environment research and applications. In J. Frost, When children play. Washington, DC: Association for Childhood Education International.
- Moore, R., & Young, D. (1978). Childhood outdoors: Toward a social ecology of the landscape. In I. Altman & J. Wohlwill, Children and the environment. New York: Plenum Press.
- Neisser, U. (1962). Cultural and cognitive discontinuity. In T.E. Gladwin & W. Sturtevant (eds.), Anthropology and human behavior. Washington, DC: Anthropological Society of Washington.
- Relf, E. (1976). Place and placelessness. London: Pion Press.
- Robinson, J.A. (1980). Affect and retrieval of personal memories. Motivation and emotion, 4, (2), 149-174.
- Schachtel, E. (1959). Metamorphosis. New York: Basic Books.
- Seamon, D. (1979). A geography of the lifeworld. New York: St. Martin's Press.
- Searles, H.F. (1960). The nonhuman environment in normal development and in schizophrenia. New York: International Universities Press.
- Waldfoegel, S. (1948). The frequency and affective character of childhood memories. Psychological Monographs, 6, (4), No. 291.

Winnicott, D.W. (1971). Playing and reality. New York: Basic Books.

Autobiographies

Anderson, Marian. (1956). My Lord, what a morning. New York: Viking Press.

Angelou, Maya. (1970). I know why the caged bird sings. New York: Random House.

Blair, Frank. (1979). Let's be frank about it. Garden City, NY: Doubleday.

Brown, Claude. (1965). Manchild in the promised land. New York: Macmillan.

Canetti, Elias. (1979). The tongue set free. New York: The Seabury Press.

Chargaff, Erwin. (1978). Heraclitean fire; Sketches from a life before nature. New York: Rockefeller University Press.

Chennault, Anna. (1980). The Education of Anna. New York: Time Books.

Chicago, Judy. (1975). Through the flower. Garden City, NY: Doubleday.

Djilas, Milovan. (1958). Land without justice. Garden City, NY: Harcourt Brace.

Dyson, Freeman. (1979). Disturbing the universe. New York: Harper & Row.

Ebban, Abba. (1977). An autobiography. New York: Random House.

Eiseley, Loren. (1971). The night country. New York: Charles Scribner's Sons.

Frisch, Otto R. (1979). What little I remember. Cambridge, UK: Cambridge University Press.

Gillespie, Dizzy. (1979). To be or not to bop. Garden City, NY: Doubleday.

Hepworth, Barbara. (1970). Barbara Hepworth: A pictorial autobiography. New York: Praeger.

Holloway, John. (1966). A London childhood. New York: Charles Scribner's Sons.

Humphrey, Hubert H. (1976). The education of a public man. Garden City, NY: Doubleday.

Huntley, Chet. (1968). The generous years. New York: Random House.

Lewis, C. Day. (1960). The buried day. New York: Harper and Brothers.

Mead, Margaret. (1972). Blackbury winter. New York: William Morrow.

Mebane, Mary E. (1981). Mary. New York: Viking Press.

Neruda, Pablo. (1978). Memoirs. Harmondsworth, UK: Penguin Books.

Powell, Jr., Adam Clayton. (1971). Adam by Adam. New York: The Dial Press.

Rivers, Caryl. (1973). Aphrodite at mid-century. Garden City, NY: Doubleday.

Scott, Sheila. (1973). Barefoot in the sky. New York: Macmillan.

Seale, Bobby. (1978). A lonely rage. New York: Times Books.

Selye, Hans. (1979). The stress of my life. New York: Simon & Schuster.

Selzer, Richard. (1979). Confessions of a knife. New York: Simon & Schuster.

Skinner, B.F. (1976). Particulars of my life. New York: Alfred A. Knopf.

Smith, Frank E. (1964). Congressman from Mississippi. New York: Pantheon.

Smith, Paul C. (1961). Personal file. New York: Appleton-Century.

Spender, Stephen. (1951). World within world. London: Hamish Hamilton.

Tawil, Raymonda Hawa. (1979). My home, my prison. New York: Holt, Rinehart, & Winston.

Theroux, Phyllis. (1980). California and other states of grace. New York: William Morrow.

Thurman, Howard. (1979). With head and heart. New York: Harcourt Brace Jovanovich.

Wechsberg, Joseph. (1979). The Vienna I knew: Memories of a European childhood. Garden City, NY: Doubleday.

Yevtushenko, Yevgeny. (1963). A precocious autobiography. New York: E.P. Dutton.

Zukerman, Solly. (1978). From apes to warriors. New York: Harper & Row.