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THE UTILIZATION OF SOCIAL SERVICES BY THE ELDERLY: ARE AREA AGENCY ON AGING SERVICES BECOMING BIOMEDICALIZED?

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INTRODUCTION

The changing demographics of American society have increasingly focused public and government attention on the problems of the elderly (Culer, 1977; Estes, 1979; Zedlewski *et al.*, 1990). Spurred by interest group activity, third-party advocacy for the elderly, and the professional concerns of academic gerontologists, the national government has developed an extensive array of programs designed to ameliorate the biological and psychological changes associated with normal aging (Day, 1990; Estes, 1979). The goals and objectives of the Older Americans Act state that these programs are designed to provide an adequate income in retirement; the best possible physical and mental health; suitable housing; restorative and community-based, long-term care services; employment opportunities and non-discrimination; retirement in health, honor, and dignity; meaningful participation; efficient community services; immediate benefit from research; and self-determination (Older American's Act, 1965; Estes, 1979; Gelfand, 1988; Olson, 1982).

A significant component of the strategy developed to achieve these objectives has been the delivery of social services (Estes, 1979; Gelfand, 1988). Under the Older Americans Act and under Title XX of the Social Security Act, the elderly population may be eligible for various kinds of supportive services either at home or in the community. Despite the accessibility of these services, considerable research indicates that such services are underutilized.

This research attempts to identify explanations of service usage by the elderly in West Alabama. One potentially significant source of

varying usage patterns is the biomedicalization of elderly social services. Several researchers have argued that the delivery of social services has been increasingly dominated by the medical model, *i.e.*, by the redefinition of the problems of aging as primarily medical problems (Binney, Estes, and Ingman, 1990; Estes and Binney, 1989; Robertson, 1990; Smith and Eggeston, 1989). Such a characterization may well reduce service utilization by healthy elderly citizens and may also explain the variation in usage that does occur. On the other hand, the variation may be explained by targeting prompted by limited resources. Under such a model, service utilization would reflect variations in personal and community resources.

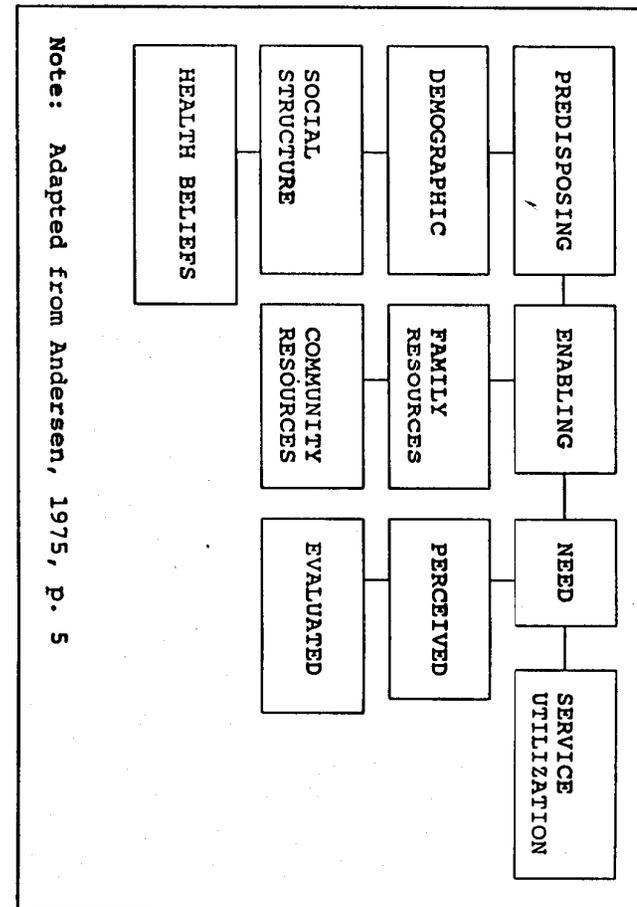
UTILIZATION OF SOCIAL SERVICES

The aging of the American population has increased the need for supportive services for older cohorts of the elderly population (Dobelstein and Johnson, 1985). The primary burden for the provision of support has traditionally rested with the family (Chapleski, 1989; Coulton and Frost, 1982; Coward and Rathbone-McCuan, 1985; Cox, Parsons, and Kimboko, 1988; Ezell and Gibson, 1989; Huttman, 1985; Kaufman, 1990; Stoller and Earl, 1983). When family support is not enough, the elderly population appears to rely on other, informal sources of support (Ezell and Gibson, 1989).

Unfortunately, if the informal support network is "unavailable, insufficient, or exhausted" (Ezell and Gibson, 1989:4-5), the appropriate recourse for the elderly is unclear. Certainly formal support agencies have arisen which attempt to provide for these unmet needs. The primary authorization and funding for such support derive from the Older Americans Act and from Medicare, Medicaid, and Title XX of the Social Security Act.

For the most part, these services are designed as counterparts to the provision of basic needs such as income, shelter, and food (Huttman, 1985:16; Dobelstein and Johnson, 1985). They cover ancillary needs such as education, recreation, and leisure and also attempt to moderate the normal physical and psychological changes associated with the aging process. Thus, recipients may have available to them access-enhancing services, in-home services, legal assistance, congregate meals, and multipurpose senior centers. Moreover, these services tend to emphasize a community-based, continuum of care; different services are provided for those with different health conditions (Huttman, 1985; Kaiser, Camp, and Gibbons,

**FIGURE 1
ANDERSEN'S MODEL OF SERVICE UTILIZATION**



1987).

Despite the availability of such formal services, however, virtually all the research on service utilization indicates that very few of the elderly make use of them. For example, in a survey of the utilization literature, Krout (1983b) reported utilization percentages ranging from 5 to 25% of the elderly population.

The most comprehensive model for explaining utilization behavior draws its explanatory power from several theoretical approaches (Andersen, 1975). Figure 1 outlines the model. According to Andersen (1975:5), the individual decision to seek and use social and medical services depends on the subject's predisposition to use the services (predisposing), her ability to obtain services (enabling), and her need for the services.

Predisposing variables include demographic factors such as age and sex; social structure (status) factors such as ethnicity, education, and occupation as well as beliefs about social services such as the efficacy of such services and the appropriate role of government in the provision of services.

Enabling variables consist of such family resources as income, social networks, levels of health insurance coverage, and such community resources as amount of health facilities and per capita income. Need components focus on the perceived and evaluated health of the individual. Perceived factors include indicators such as self-reported health and number of disability days. Evaluated health focuses on actual clinical judgments.

Theoretically, the model assumes that service utilization would be higher among those with predisposing characteristics, such as being female, older, low status, and pro-government intervention (Coulton and Frost, 1982; Harel, 1987; Joseph and Cloutier, 1990; Krout, 1983a; Starrett and Decker, 1987). The findings on resources are contradictory. On the one hand, utilization should be higher among those with the resources to respond (Coward and Rathbone-McCuan, 1985; Olson, 1982). Thus, higher income and greater insurance coverage should be associated with greater use of services. On the other hand, services should be directed toward those with the least resources. Therefore, lower income and less insurance coverage should be associated with greater use of services. Finally, service use should also be directly related to level of need. Those with the greatest perceived and actual need should make the most use of services (Coulton and Frost, 1982; Chapleski, 1989; Krout, 1983b; Windley and Scheidt, 1983).

BIOMEDICALIZATION OR LIMITED RESOURCES?

Despite the widespread use of the Andersen model to explain service utilization among the elderly, the model suffers from a serious weakness. The model clearly assumes that the primary explanations of service utilization are individually based (McKinley, 1972:118-119). To be sure, the model can incorporate such explanations. For example, the Andersen formulation does provide some indication of the impact of community resources and social structure. But, the individual-level nature of the data often leads researchers to individual-level explanations when broader social explanations may provide more insight. What the analysis needs is a systematic model that will allow researchers to predict the patterns that might arise from individual-level data.

One macro-level model that has been used to explain the provision of services to the elderly is the process of biomedicalization (Estes, and Binney, 1989; Robertson, 1990; Smith and Eggelston, 1989; Binney *et al.* 1990:761):

The concept of medicalization is used to designate the process by which services for the elderly are increasingly brought under the domain and rationality of biomedicine, and elements of the community delivery system are increasingly drawn toward the provision of medically-related, medically-supportive, and/or medically-oriented services.

According to this model, public policy in aging has become dominated by the medical model of analysis. The problems of aging become medical problems. Under such a system of analysis, the physician becomes the primary gatekeeper to the network of services (Yeo and McGann, 1986). As a result, the primary services delivered are services with a connection to medicine. These services could be outpatient health care services or in-home health services. In addition, other services take on a medical case. The medical gatekeeping function tends to direct both health and social services toward those recipients with higher levels of medical need.

According to the biomedical model, then, service delivery patterns should show a distinct bias toward medical services (mostly in-home health and associated services) over other kinds of social services (housekeeping, access, etc.). If services are becoming more medicalized over time, in-home services should be a large component of services provided by the various elderly service providers.

Perceived availability among the elderly should be higher for in-home services than for other kinds of elderly social services.

Hypothesis 1: If biomedicalization is affecting the pattern of service delivery, the perceived availability of services should be higher for in-home services than for more general services.

At the individual level, the biomedicalization of social services would also affect service utilization. Medicalization implies a dependent, elderly population (Binstock, 1983). Most elderly are independent and prefer to remain independent for as long as possible. Medicalization of services and the notion of continuum of care may well imply to the elderly that acceptance of such services is the first step on the road to institutionalization. Underutilization would result. Unfortunately, underutilization is difficult to test because research has produced no standard for adequate utilization.

However, service utilization would also vary according to the dependence of the potential recipient under the medical model. The more dependent the possible recipient, the more likely it is under the biomedical model for that individual to use medical social services but underutilize social services. Deficits in basic activities of daily living (ADLs) should have greater influence on medical services whereas deficiencies in instrumental activities of daily living (IADLs) should have greater impact on general social services. Moreover, because the Andersen model of service utilization is a model developed for health services, it should do a better job of explaining variation in health-oriented service usage than social services usage.

Hypothesis 2: The biomedical model implies that medically-oriented service usage should be higher with greater dependence on basic activities of daily living.

Hypothesis 3: The biomedical model also implies that medically-oriented service usage should be higher for respondents with poor health (and less mobility).

Hypothesis 4: The biomedical model implies that general social service utilization should be higher with greater dependence in instrumental activities of daily living.

Hypothesis 5: The biomedical model also implies that general social service usage should be lower for those with

poor health (and less mobility).

Hypothesis 6: If the biomedical model is accurate, the explained variation should be higher for medically-oriented social services than for general social services.

To be sure, a relationship between dependence and service use does not guarantee that medicalization is the explanation. Service delivery may also be affected by limited resources. Most state and local jurisdictions (including Area Agencies on Aging [AAAs]) are severely underfunded by the Older Americans Act and Title XX. Many are further crippled by low levels of wealth that provide little tax base for redistributive policy. Because the jurisdictions have so few resources, they have a vested interest in reducing demand for the services despite the universal language of the enabling statutes. Thus, cost control generates targeting, the focusing of services on particular elements of the elderly population. Considerations of adequacy and equity generally concentrate these resources on the dependent elderly and on those with low incomes.

Thus, a relationship between dependence and service utilization does not prove that the relationship is medical in nature. Both the biomedical model and the limited resources model posit dependence as an explanatory factor. However, the limited resources model can be tested directly. If limited resources are the primary determinant of service delivery patterns, then indicators of both wealth (individual and community) and dependence should be significant. If the wealth indicators are not significant and the dependence indicators are, the biomedical model is not conclusively proved, but the primary competing model can be rejected.

Hypothesis 7: The limited resource model implies that both medically-oriented social service use and general social service use should be higher with higher level of dependence.

DESIGN AND METHODS

The relative influence of biomedicalization and limited resources on service utilization can be tested using data available from a recent needs assessment conducted for the West Alabama Planning and Development Council (WAPDC), the AAA for seven West Alabama counties (Baumhover *et al.*, 1990). The planning and service area for

West Alabama includes Bibb, Fayette, Greene, Hale, Lamar, Pickens, and Tuscaloosa counties.

A portion of the assessment was a random sample telephone survey of Alabamians over 60 years of age in the seven-county area. The research population included all county residents over 60 with listed telephone numbers. A sampling frame of 4,500 phone numbers was selected on the assumption that approximately one household in five would contain at least one resident over 60. This procedure identified 1,017 potential respondents. Of these individuals, 469 or 46.1% agreed to be interviewed. The typical response rate for those over 60 is around 60% so this figure is low (Cantril, 1991:105). Nevertheless, it is close to the minimum of 50% response assumed to be necessary for reasonable accuracy in a telephone survey (*Ibid.*, 99-106).

The survey asked several questions directly related to the utilization of services. The instrument surveyed the perceived availability and use of 14 social services. A principal component analysis of both perceived availability and service utilization revealed that only six of these services loaded on common factors with a reasonable high level of reliability. Three of these services were combined into an additive use scale of core (general) Older American's Act services including transportation, senior center, and nutrition sites ($\alpha = .603$).¹ These services reflected the original broad-based philosophy of the Act (Estes, 1979). The second additive service scale consisted of three services designed for in-home care including home health services, respite care, and homebound meals ($\alpha = .429$). These services exhibited the emphasis on targeting that has become explicit in recent reauthorizations of the Act (Gelfand, 1988).

The first hypothesis can be tested by comparing the perceived availability of the core services versus the in-home services. Additive scales of perceived availability were constructed using procedures similar to those to create the use scales. Respondents were scored on the number of core services they perceived to be available in their community ($\alpha = .496$) and the number of in-home services they thought were obtainable in the jurisdiction ($\alpha = .389$). Despite its weaknesses, the Andersen model provided a useful framework for comparing the biomedical and limited resources models because it includes indicators of both social structure and community resources.

The procedure that was used to test Hypotheses 2 through 7 was multiple regression. The dependent variables were the core

service and in-home scales. The predisposing variables included sex (female = 1, male = 0) and age. Respondents who were female and older were more likely to use services. Previous studies have generally supported these observations (Krout, 1983b); these indicators may also have been an indirect measure of dependence. Social structure variables included race (non-white = 1, white = 0) and education. Generally non-whites and those with low education should have been more likely to use services under the limited resources model.

The enabling factors encompass indicators of family resources and community resources. Family resources included three measures of personal resources (income; marital status, 1 = married, 0 = single; and home ownership, 1 = owner, 0 = others), two measures of insurance (Medicare vs. private payment factor scale, = .169; Medigap vs. Medicaid factor scale, = .378, and two measures of social interaction (number of people in the household and an additive organizational membership scale, $\alpha = .419$).

Given the limited resources model, elderly respondents who were single, renters or low income should have made greater use of social services. Similarly, reliance on Medicaid and Medicare should have been associated with higher utilization of services. Moreover, because interaction seems essential to knowledge of services, higher degrees of social contact should have been associated with greater use of services (Chapleski, 1989). Community resources comprised the per capita income of the county in which the respondent lived and the respondent's perception of the availability of core services and in-home services. If limited resources are the dominant influence, respondents in poorer counties should have had higher levels of utilization. In addition, the respondents should have been more likely to use services they believed were available.

The need factors are the primary indicators of dependence. Two indicators used in this study tested types of dependence that might prompt medically-oriented services. The first indicator was a poor health factor scale combining subjective health and a question concerning whether the respondents' health interfered with their daily activities ($\alpha = .724$). The second was an additive scale of the number of basic activities of daily living ([ADLs] eating, bathing, dressing, maintaining appearance, and transferring to and from bed) the respondents reported they could perform.

The third scale measured types of dependence more appropriate to general social services. This was an additive scale of the number of six instrumental activities of daily living ([IADLs] shopping

TABLE 1
CHARACTERISTICS OF THE WEST ALABAMA SAMPLE

Andersen Model Variables:	Frequencies N	
Predisposing:		
Sex: % Female	73.5%	446
Age: % Over 75	29.0	442
Race % Non-White	76.9	451
Education: % < 12 yrs.	48.7	435
Enabling:		
Income: % < \$10,000	55.9%	370
Marital: % Unmarried	45.7	451
Housing: % Rents Home	16.2	450
Insurance: % Medicare	77.8	428
% Medicaid	17.9	385
Household: % 1 person	35.5	453
Groups: % 0-1 memberships	60.8	469
County Inc.: Mean	\$9,970	462
Services Available:		
Core AAA ^a : % 1 or more reported	88.9%	469
In-Home ^b : % 1 or more reported	87.0	469
Need:		
ADLs: % Need help for 1 or more	11.4%	469
IADLs: % Need help for 1 or more	44.1	469
Health: % Fair or poor	44.9	466
% Hinders daily activity	35.2	431
Services Used:		
Core AAA ^a : % 1 or more reported	26.0	469
In-Home ^b : % 1 or more reported	14.5	469

Note: Survey conducted in Bibb, Fayette, Greene, Hale, Lamar, Pickens, and Tuscaloosa counties in Alabama.
^aCore services include transportation, nutrition sites, and senior centers. ^bIn-home services include home health care, respite care, and home-bound meals.

making appointments, maintaining the yard, cleaning the house, preparing meals, and transferring in and out of the car) that the respondents stated they could accomplish only with assistance ($\alpha = .821$). Generally, if the biomedical model is accurate, the first two need indicators (health scale and ADLs scale) should have a greater influence on variation in service utilization than the IADLs scale. If, on the other hand, the limited resources model is more appropriate, the IADLs scale will have the dominant influence or neither scale will be influential.

RESULTS AND DISCUSSION

The characteristics of the West Alabama sample are reported in Table 1. The respondents were predominantly female, white, between 60 and 75, Protestant, low-income, and homeowners. The black elderly made up approximately one-quarter of the sample. About half of the sample had less than a high school education; the other half had at least a high-school degree. A substantial minority lived alone; a majority lived with one other person. Most respondents (2/3) resided in rural counties.² A large majority of respondents used Medicare, private insurance, and direct payment to pay medical expenses. Most of those surveyed belonged to one or fewer organizations. The most common single organization was church. The majority of the respondents needed no help with either basic or instrumental activities of daily living.

Contrary to Hypothesis 1, more respondents were aware of and used core services (transportation, nutrition sites, senior centers) than in-home services (home health nursing, home-bound meals, respite care). Approximately 90% were aware of at least one of the services; 35% were aware of all three. Roughly 87% were cognizant of at least one in-home service, whereas only 20% were familiar with all three. Service utilization for both categories of service was very low; however, core services received more use than in-home services. Only 26% of the respondents had used at least one of the core services; less than 15% had used in-home services.

Overall, the regression equation explained relatively low proportions of the variance for both core services (30%) and in-home services (13%) (Table 2). The lower proportion of explained variance for in-home services contradicts the expectations of Hypothesis 6. The biomedical model predicts that the variance explanation for medical social services would be higher.

TABLE 2
THE INFLUENCE OF BIOMEDICALIZATION AND
LIMITED RESOURCES ON AREA AGENCY ON AGING
(AAA) CORE AND IN-HOME SERVICES AMONG
WEST ALABAMA RESIDENCE

Andersen Model Variables	AAA Services	
	Core ^a	In-Home ^a
Predisposing:		
Female	-.046	.037
Age	.017***	.001
Non-White	.054	-.072
Years of Education	-.020	-.013
Enabling:		
Family Resources:		
Income	-.000	-.000
Marital Status - Married	-.120	-.131**
Own Home	-.456***	-.061
Medicare v. Insurance	.055	-.000
Medigap v. Medicaid	.082**	.005
Community Resources:		
County Per Capita Income	.000	.000
Perceived Availability	.276***	.124***
Social Interaction:		
No. of People in Household	.085**	.027
Group Membership Scale	.080***	-.007
Need:		
ADL Scale	-.035	.037
Instrumental ADL Scale	.074***	.044**
Poor Health Scale	-.115***	-.052*
Constant:	-1.086**	.013
N	469	469
R-Squared	.300	.133
F	12.124***	4.316***

Note. Regressions use mean substitution for missing data.
Income has 21% missing data. Minimum pairwise N = 354.
^aUnstandardized beta coefficients.

*p < .10. **p < .05. ***p < .01.

Neither the biomedical model nor the limited resources model received much support from the multiple regressions. Of the predisposing variables, only age was significant and only for core services. The older the survey respondent, the more likely was that respondent to use core services, all other things being equal.

Among the enabling variables, neither personal nor county income had a significant impact on service usage for core or in-home services. Those who owned their own homes were less likely to use core services, but neither Medicare nor Medicaid coverage induced greater service use. In fact, those who used Medigap insurance as a supplement to Medicare rather than Medicaid were significantly more likely to use core services. For in-home services, the only significant enabling factor was marital status. Single, older respondents were more apt to use in-home services than married respondents. Counter to the expectations of Hypothesis 7, limited resources have no consistent impact on service utilization.

The social interaction scales and the perceived availability of services had the most consistent impact among the enabling factors. For core services, higher levels of social interaction (more people in the household and greater diversity of organizational membership) induced greater service use. For both dependent variables, perceptions of availability were directly linked to the use of the service.

The need factors produced the most unusual results. For the biomedical model, the hypotheses concerning in-home services are more important than the hypotheses for core services. Yet, the regression equations support the core service predictions and confound the in-home predictions. As expected, IADLs are more important than basic ADLs in explaining variation in core service use. Poor health does limit core service usage. But the same pattern holds for in-home service use. Basic ADLs have no relationship to in-home service usage, whereas IADLs do. Poor health also reduces the likelihood of using in-home services.³

Neither the biomedical nor the limited resources model is an accurate representation of service usage in West Alabama. The service delivery pattern perceived by elderly county residents do not indicate any pattern of emphasis on either medical services or low-income recipients. Service utilization seems most common among older and single renters. Not surprisingly, perceived availability is important for both types of service and large numbers of social contacts seem important for increased use of core services. Both sets of services are sensitive to the difficulties that older adults have in

carrying out IADLs but poor health reduces utilization overall.

Perhaps the most important impression that arises from the statistical analysis is the marginality of formal social services to the elderly population of West Alabama. Usage of both classes of service is low. For most of the sample, they are a convenience, not a necessity. The significance of the IADLs scale rather than the ADL scale for both core and in-home services supports this interpretation. The IADLs scale implies that needs not as central to the functioning of the respondents. Service usage thus varies on the basis of activities that link the older citizen to the outside community and not on the basis of activities necessary to the basic functioning of the individual. This interpretation is also supported by the fact that poor health is associated with reduced usage of both kinds of services. Poor health seems to magnify difficulties in establishing contact with the community and reduces access to service delivery mechanisms.

CONCLUSIONS

Ironically, the analysis above confirms to a degree the original mandate of the Older Americans Act to provide universal eligibility to all senior citizens. Despite targeting provisions written into the statute during its various reauthorizations (especially 1987) and despite some evidence of medicalization of social services, in West Alabama the Act functions very much as it has since its inception. At least for senior citizens in that service area, access to services and facilities is not targeted. Service usage appears to vary primarily on the basis of contact with the community (as measured by the IADLs, poor health, and social interaction scales) and perceived availability of services.

Interestingly, such a pattern of service delivery may itself be a subtle sign of targeting. The sensitivity of service utilization to indicators of community contact and perceived availability suggests that this particular Area Agency (and perhaps others) may be using lack of information about the programs as a means to regulate demand and minimize costs. The primary mechanism for obtaining information about AAA programs is word of mouth. A parallel study of nutrition sites in West Alabama found that the most common source of information about the nutrition program was friends (Baumhover *et al.*, 1990). Very few nutrition program participants received information about the program from a media source. Thus, the Area Agency has not spent much of its budget extensively advertising the

availability of services.

Nevertheless, even expanded advertising would probably not change the marginal image of the programs among their potential participants. To the population of older adults in West Alabama, the AAA programs, whether core services or in-home, appear to be a last resort, a final source of sustenance after family and other sources of informal support have been unable to meet the needs of the elderly person. When the elderly population does turn to the agency, deficiencies in basic functioning are usually not the trigger. To the extent that these motivations remain dominant in West Alabama and to the extent that this area mirrors implementation in other service areas, the lofty goals of the Older Americans Act are unlikely to be met.

NOTES

1. Scores range from 0 to 3 for both sets of services. Simple additive scales were used for the dependent variables because the use of factor scales did not improve the reliability of the scales. The theta coefficient for the one-dimensional factor scale of core AAA services was .598. The theta coefficient for in-home services was .411.
2. This disparity arose because of lower response rates among the urban elderly (Cantril, 1991).
3. Multicollinearity between IADL and ADL scales did not appear to contribute to this conclusion. The zero-order correlation between the two scales was only .598 ($R^2 = .358$). The zero-order relationships between the IADL scale and service usage were between 50% and 100% larger than the comparable relationships for the ADL scales.

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