Assessing Well-Being in Forest Dependent Communities

Jonathan Kusel

SUMMARY. This paper presents a new approach to the conceptualization and assessment of well-being in forest-dependent communities. Studies of well-being in agrarian communities, boomtowns (communities undergoing rapid growth), and forest-dependent communities are examined to highlight common themes in natural resource-dependent community studies. Social indicators are discussed and a summary of weaknesses presented. The county, a commonly used unit of analysis, is rejected in favor of a more socially relevant unit. This new approach to well-being in forest communities begins with definitions of the terms community and forest dependence. The work of Amartya Sen, whose conceptualization of well-being focuses on the real opportunities people have and their achievements in light of their opportunities, forms the foundation of the new approach proposed here. Sen’s conceptualization is broadened by focusing on the community and acknowledging the importance of a sense of place. Methodologically, this new approach aids in the evaluation of social indicators an assessment of community capacity that consists of three components: physical, human, and social capital. It also involves evaluating how residents draw on and develop

Jonathan Kusel is Director, Forest Community Research, P.O. Box 11, Taylorsville, CA 95983.

The author would like to thank reviewers for their helpful comments on this and a previous version of this manuscript which appeared in the Sierra Nevada Ecosystem Project (SNEP): Final Report to Congress, vol. II, Davis: University of California, Centers for Water and Wildland Resources, 1996. Questions or comments should be directed to the author at Forest Community Research, 4352 Main Street, Suite 2, Taylorsville, CA 95983.

[Heaworth co-indexing entry note]: “Assessing Well-Being in Forest Dependent Communities,” Kusel, Jonathan. Co-published simultaneously in Journal of Sustainable Forestry (Food Products Press, an imprint of The Haworth Press, Inc.) Vol. 15, No. 1-2, 2001, pp. 359-384; and Understanding Community-Based Forest Ecosystem Management (ed: Gerald J. Gray, Mark J. Binner, and Jonathan Kusel) Food Products Press, an imprint of The Haworth Press, Inc., 2001, pp. 359-384. Single or multiple copies of this article are available for a fee from The Haworth Document Delivery Service (1-800-342-6976, 9:00 a.m. - 5:00 p.m. EST). E-mail address: google-documents@haworthpressinc.com.

© 2001 by The Haworth Press, Inc. All rights reserved.
these aspects of their community to meet local needs and create opportunities. This results in a well-being assessment that includes static as well as dynamic measures of how communities respond to and create opportunities to improve local well-being. [Article copies available for a fee from The Haworth Document Delivery Service: 1-800-342-9678. E-mail address: <getinfo@haworthpressinc.com> Website: <http://www.haworthpress.com>]

KEYWORDS. Community-based forestry, community well-being, forest-dependent community, social indicators

Forest ecosystems in North America have become the focus of comprehensive and broad-scale ecosystem studies. Many have adopted an "ecosystem management" approach (Bormann et al. 1993; Forest Ecosystem Management Assessment Team [FEMAT] 1993; Ministry of Environment 1994, Ogilvy and Arneil 1997; and Sierra Nevada Ecosystem Project 1996). Ecosystem management has been defined in diverse ways, but it is generally agreed that humans and human communities are part of ecosystems and an important area of study (Gumbine 1994; Manley et al. 1995, World Commission on Environment and Development 1987).

This paper presents a new conceptual and methodological approach to assessing well-being in communities that depend on natural resources. It takes this focus primarily because of the recent emphasis on forest ecosystem studies and secondarily because the well-being of communities in forested areas has long been too narrowly discussed in the context of extractive forest management activities. Studies involving other kinds of natural resource-dependent communities and using social indicators are examined to highlight the diverse, complex approaches to understanding human well-being.

The paper is divided into two parts. The first reviews studies evaluating the well-being of individuals living in natural resource-dependent communities, concluding with a discussion of social indicators.

The second part of this paper presents a new approach to the study of well-being in forest-dependent communities defining the terms "community" and "forest dependence," and "community capacity," introducing the ability of communities to effectively respond to issues and create local opportunities. The work of Amartya Sen forms the foundation of the new approach.

The paper concludes with a discussion of how this expanded focus informs a new approach to community well-being assessment in the context of ecosystem management studies.

Resource Dependency and Well-Being

The inclusion of humans and the study of community well-being is in its infancy in ecosystem studies. It is therefore useful to briefly examine empirical studies of resource dependency and human well-being in natural resource-dependent communities (NRDCs). This brief review offers a glimpse of the diverse ways researchers have grappled with linking resource dependency and human and community well-being. Two classic studies of well-being in NRDCs are reviewed, followed by an examination of studies of boomtowns (communities that have undergone extremely rapid growth associated with the extraction of nonrenewable resources) and forest-dependent communities.

An often implicit and underlying aspect of resource-dependent community studies is the attempt to understand the relationship (usually termed "dependence") between resources and well-being, which overlooks the more basic questions of what constitutes well-being and how that well-being might best be evaluated. Other research, such as work on social indicators, has already addressed these questions more directly, though still not without difficulties.

Two Classic Studies—Two of the best-known studies linking resource use and community well-being were done in the mid-1940s in California and Montana. Walter Goldschmidt investigated agricultural communities in California, and Harold and Lois Kaufman examined forest communities in Montana. The way these researchers conceptualized the connection between resource use and well-being laid the groundwork for studies that followed, even 50 years later.

Goldschmidt (1947) evaluated the structure of agriculture and its relationship to community well-being in California. The variables he examined included the wages of owner-operators, industrial workers, and basic laborers; employment turnover; labor security; social isolation of workers; labor participation in important community decisions; and the strength and diversity of community institutions and infrastructure. Goldschmidt found that an increase in the concentration of the farm sector led to a decline in rural economic and social well-being. In contrast to a community surrounded by large farms, one surrounded by small farms had a higher percentage of self-employed and white-collar workers; a lower percentage of farm wage laborers; more business and retail trade; more schools, parks, civic and social organizations, newspapers and churches; a better developed infrastructure;
and a more local decisionmaking structure. The most affected dimensions of well-being were living conditions and income.

Subsequent studies have shown that the inverse relationship between large-scale industrialized agriculture and well-being still generally holds true for California and nearby states in which large-scale industrial agriculture is dominant (MacEachen 1988; Swanson 1988), but researchers agree that regional and historical settings must be taken into account to assess localized effects (Lobato et al. 1993). In raising the issue of land tenure's impact on the well-being of agrarian communities, Goldschmidt's study raised the possibility that concentrating the control of other resources particularly in the hands of essentially absentee owners might have similarly adverse effects in other kinds of resource-dependent communities.

A cornerstone of Goldschmidt's study is the Jeffersonian ideal of the small, agrarian rural community. This is the model against which agricultural and other resource-dependent communities have been evaluated (Bealer et al. 1965; Drielsma 1984; Swanson 1988). The community in this model is typically stable, small-scale, and offers opportunities for healthy family life, independence, and entrepreneurial activity (Drielsma 1984).

The best-known forest community study of well-being was carried out by Harold and Lois Kaufman (1946) in the Libby-Troy area of Montana. In addressing well-being, the Kaufmans used the then-popular term “stability.” But because their use of stability encompasses much more than employment, the term “well-being” is substituted for it in this discussion.1

The Kaufmans believe that the creation of a prosperous economy is essential to well-being, but in addition to “what people do for a living,” the Kaufmans evaluate “how well they live.” They state, “A characteristic of the good life is that experiences in the community and of the forest are not only regarded as means but as ends in themselves—they are appreciated and enjoyed for their intrinsic worth. Also, the good life has a depth and variety of experience” (p. 23). They point out that attainment of “the highest standard of living” can only be realized by maintaining a balance between population and natural resources and link this concern to the limits of “timber supply, production costs and markets” (p. 15). Like more conventional analysts, the Kaufmans agree that maintaining community well-being involves developing a stable timber industry and a diversified economy and practicing sustained-yield forestry. They describe five additional “approaches” toward maintaining community well-being: organizing the greater community, strengthening the rural home, making religion a part of life and the church more community-centered, promoting public participation in the decisionmaking process as well as product.

Kaufman and Kaufman question the wisdom of the Sustained-Yield Forest Management Act passed at the time of the study. They argue that it favors timber operators with large holdings, thereby concentrating economic power in the hands of a few while being “silent concerning controls that might be needed to safeguard the public interests” (p. 71). In one of the first calls for stakeholder involvement, the Kaufmans suggest the Forest Service involve the public in formulating forest policy to ensure that the concentration of economic power does not result in the abrogation of public interests and concerns. They maintain such involvement should be “extensive” (p. 85). The Kaufmans' study is rare in its attention to these issues.

Boothen Studies—Studies of rapid resource-related growth in small communities, commonly known as boomtown studies, focus on the impact of natural resource development. Well-being is generally discussed in terms of social disruption—primarily increased crime—resulting from rapid population increases. Population growth, as the independent variable, is associated with extractive energy projects such as oil or gas or mining development. Dependent variables have included measures of income and various aspects of employment, but the most commonly used variables by far are measures of crime (Albrecht 1982; Finsterbusch 1982; Freudenburg and Jones 1991; Gold 1982; Kramlich et al. 1989; Seydlitz et al. 1992; Wilkenson et al. 1982).

Some researchers have drawn broad conclusions suggesting that rapid development leads to the loss of integrative functions and is accompanied by a loss of local control. This is caused primarily by the rapid influx of outsiders overwhelming existing social services and networks (Jobes 1984a, 1984b; Gold 1985; Kennedy and Mehra 1985; Kramlich et al. 1989). Gold (1985) believes social disruption is caused by contrasts in lifeways and involves the replacement of close friendships and kin networks (gemeinschaft characteristics) with a less integrated social organization.

Freudenburg and Jones (1991), in an exhaustive review of boomtown studies, found that crime increased (by a factor of three, on average). This is in contrast to earlier studies, which, as Freudenburg and Jones point out, overstate the benefits of development activities. Yet, while lending support to the social disruption thesis (Finsterbusch 1982), the authors take issue with those who use grand theories and draw broad conclusions. They adopt what they term a middle-range perspective and suggest this increase in crime is due to reduced density of acquaintances. Unlike Goldschmidt's findings, however, decisionmaking controlled by outside organizations was not examined or did not surface as a significant issue for researchers in these studies.

Forest-Dependence—Building on the theme of outsider control raised in both Goldschmidt's and the Kaufmans' work, Marchak (1990), studied forest-dependent towns in British Columbia. That study explored the adverse effects of uncertainty about future employment (reflected in high rates of
population turnover) stemmed from control of the resource base by outside firms that make decisions "without reference to the needs of workers in these communities" (p. 99). Marchak noted that high turnover rates reflect the structure of the industry rather than the personal choices of workers. She was the first researcher to note that women are particularly dehumanized by the conditions in single-industry forest towns.

Kussel and Fortmann (1991) and Kussel (1991) studied forest counties and communities in California, focusing on general well-being and the capacity of forest communities to maintain and enhance local well-being. They define capacity as "what enables communities to pull through hard times" (Kussel and Fortmann 1991:84). Kussel and Fortmann determined that communities are deeply affected by forces outside of their control, including outside employers, natural-resource decisionmakers, and outside money. They found that a higher concentration of private forest landholding is associated with a lower median income, and high percentages of public timberland are associated with higher poverty rates (at the county level). They also found pockets of high poverty in low-poverty forest counties. In contrast to studies characterizing the "inevitable" culture clash between newcomers and long-standing residents (Price and Clay 1980; Schraiber 1986), Kussel and Fortmann note that new residents and women play crucial roles in mobilizing community action and increasing local capacity.

In an ethnographic study of several communities, Kussel found that extensive job loss in rural forest communities was devastating in both the short and long term. Economic and social turmoil led to short-term difficulties for families and communities and resulted in a long-term reduction in community capacity. Kussel also found that local, family-run mills contribute more to community well-being than mills owned by large, non-local owners.

Forest communities in the Pacific Northwest were the focus of a social assessment conducted by the Forest Ecosystem Management Assessment Team (FEMAT).² The FEMAT study is one of the first large-scale American ecosystem studies to explicitly include and assess human communities. The primary objectives of this social assessment were to identify the consequences of forest management alternatives for communities and individuals and describe how these alternatives might affect social values and constituencies (FEMAT 1993, VII-45). Though there was insufficient time available for a comprehensive assessment, this was the first large ecosystem study to use the concept of community capacity and convene panels of experts to assess it. The concept of community capacity was defined in the workshops as an independent variable that influences community response to and the consequences of land-management alternatives. Higher-capacity communities were considered more adaptable and therefore less affected by changes in forest management. The concept of capacity, advanced in the Sierra Nevada Eco-

system Project (1996), plays a key role in the new approach to well-being and is described later.

**Social Indicators and Well-Being**

Social indicators are used in (1) social impact assessment (SIA), which predicts and assesses the consequences of technical projects (e.g., hydroelectric projects, waste-dump siting, etc.) and policy actions (Interorganizational Committee 1994), and (2) research that evaluates well-being or general life conditions (e.g., Allard 1993; Campbell 1981). This portion of the paper also examines the philosophical and conceptual underpinnings of well-being. These two broad areas of research offer important insights into the relationship of resource dependence to community well-being, and are relied upon for much of this discussion.

Terms such as "standard of living," "quality of life," "welfare," "happiness," "life satisfaction," and others have all been used in studies to characterize a good and healthy life or the critical components of one. But they often have different meanings to different people, leading to confusion about well-being and how it might best be measured. The numerous approaches to the study of well-being, measuring utility, income, personal satisfaction, and happiness, to mention just a few, have yielded incomparable results, which have often further muddled the waters of well-being assessment. Burdge (1994:3) states, "The field of impact assessment does not have a series of agreed upon concepts or list of variables around which to accumulate research knowledge." This same lack of agreement characterizes how environmental planning and social assessment might be effectively linked.

In addition to conceptual concerns, social indicator researchers have wrestled with the problem of whether to study well-being using subjective self-report measures or sociodemographic measures, what many consider to be more "objective" measures of external conditions (Allard 1993; Erikson 1993). Implicit in the debate over appropriate measures are the questions, What variables should be evaluated? and Who should do the evaluating? Sociodemographic measures of crime, income, employment, and poverty are frequently the measures of choice because they are easily gathered (or have already been gathered, in the case of U.S. Census Bureau data). Such measures have more direct policy relevance for governments than other measures (De Neufville 1975). (See Burdge 1994 and Interorganizational Committee 1994 for discussions of categories and indices.) Yet, despite their widespread use, both sociodemographic measures and subjective self-report measures have significant limitations. Scn (1985b), in particular, and others have provided powerful critiques.

Five Limits of Social Indicators

First, social indicators, which consist of aggregate individual data, ignore the variability of structural conditions at the level of a county or region, and of such institutional arrangements as the concentration of capital, land ownership, and power that influence well-being in a community (Kennedy and Mehra 1985; Kim 1972). Communities with greater disparities in wealth often have lower community well-being than those with more equal distribution of wealth, even though average measures such as income may be the same. Goldschmidt's (1947) evaluation of the structure of agriculture and its relationship to community well-being is a good example of why this consideration of institutional arrangements is important.

Second, Sen (1985b) points out that measures of opulence such as income confuse well-being with being wealthy in terms of material possessions. Measures of real income provide an indication of what an individual can buy, or one's "commodity command," but they provide no indication of how an individual may improve his or her life with purchased commodities. Sen (1987) states that commodities provide only a means to an end, arguing that the issue is more a "matter of the life one leads rather than of the resources and means one has to lead a life" (p. 16). In their research, Kaufman and Kaufman (1994) expressed a similar concern with how well individuals live.

Third, and related to the previous point, is the issue of what constitutes well-being for whom. For instance, sociodemographic measures of opulence do not take into account the distribution of resources within a family (Sen 1985b). A male head of household, for example, may purchase luxury items for himself while other family members are inadequately clothed and fed. Similarly, the concerns of women may differ from those of men. Nussbaum and Sen (1993) question whether the quality of female life has similar constituents to the quality of male life. Feminist research was launched out of a concern that women's perspectives and their life circumstances were not recognized. Oakley (1975) pointed out that women have been reduced "to a side issue from the start..." And the concerns of adolescents may differ from those of adults. Freudenburg (1984) discovered that adolescents in rapidly growing communities were more likely to be dissatisfied with location and less satisfied with overall quality of life than adolescents in similar towns that were not rapidly growing, whereas the same sense of dissatisfaction did not hold for adults.

A fourth problem has to do with subjective measures and the distinction between ill-being and well-being. Subjective well-being is commonly measured with scales indicating satisfaction with the self as a person, personal freedom, personal happiness, and sense of personal control (Campbell 1981; Chamberlain 1985). Yet, Headey and colleagues (1985) point out that well-being may be a different dimension than ill-being. They found that more objective measures of health and material standards of living while contributing little to one's well-being significantly contributed to measures of ill-being. Bradburn and Caplovitz (1965) and Wilson (1967) found the same to be true for measures of happiness. There are positive and negative dimensions that are independent of one another. In addition to requiring the measurement of positive and negative dimensions, this suggests that people may adjust their perceptions of well-being (or happiness) to the conditions they face.

Studying the same issue from an economic and philosophical perspective, Sen (1985b) states that subjective measures of well-being, such as pleasure and desire fulfillment, are incomplete for two reasons: (1) they are fully based on the mental states of an individual, and (2) they lack a personal metric of value ("the mental activity of valuing one kind of life rather than another"). Sen terms these reasons "physical condition neglect" and "valuational neglect," respectively. An example illustrates the incompleteness. One who is poor, without the comfort of a home, out of work, and ill-fed but happy has obviously adjusted her expectations and taken solace in small pleasures. But fulfillment of limited desires, no matter how happy the person might be, is not suggestive of a high level of well-being. Moreover, this psychological state cannot be compared to that of another individual whose desires are greater. Sen (1984) states, "Quiet acceptance of deprivation and bad fate affects the scale of dissatisfaction generated, and the utilitarian calculus gives sanction to that distortion. This is especially so in interpersonal comparisons" (p. 309).

Fifth, researchers who have examined the relationship between objective and subjective measures have shown that sociodemographic indicators have little connection to subjective measures of well-being (Barlett and Brown 1985; Campbell 1981; Gans 1962; Mastekaasa and Moum 1984; Oppong et al. 1988; Suttles 1969). Moum (1988) found that only 10 percent of the variance in quality-of-life scales is explained by sociodemographic variables. Gans (1962) reported in his study of West Enders in Boston that despite residents' high degree of satisfaction with their neighborhood, upper-middle-class professionals declared it a low-income slum, and the area was razed for redevelopment. The difference between the two groups' judgment of the area provides a warning that not only may measures differ, but they may do so because they reflect the values (and power) of those doing the measuring rather than those whose well-being is being evaluated.

Given gender, class, and ethnic differences and the importance of local salience, it is not surprising that despite numerous measures of well-being, no standard metric has emerged (Burde 1994; Johnson 1988; Oppong et al. 1988). These arguments suggest that an assessment of complete well-being may indeed be unobtainable. They also demonstrate that considerable humil-
ity is necessary in any such assessment and interpretation, and show the importance of involving those who are the subject of evaluation.

The Social Unit of Analysis

In the debates over the use of self-report measures versus sociodemographic measures and over appropriate metrics of well-being, insufficient attention has been paid to the unit of analysis or level of data aggregation used for assessment. This oversight has led to additional confusion about whose well-being is discussed and about causal and associational relationships. The county has been the most common unit of analysis in studies of forest-dependent communities (Machlis and Force 1988), but its exclusive use is inadequate for several reasons (for a contrasting view, see Lebbo 1990).

Perry (1986) has criticized the use of counties because they are not a unit with real social meaning. People do not generally identify with counties, and, indeed, numerous NRDCs are alienated from their parent county. Relationships and life take place in communities, not counties or larger regions.

Often only a small percentage of communities (and subpopulations within them) are resource-dependent in a traditional sense, a fact important for NRDC assessment, and aggregate county or regional level data often obscure these relationships. In one of the most traditionally resource-dependent counties in the Sierra Nevada, median family income is slightly more than $24,000. The county’s four largest communities are more dependent on traditional natural resource industries than the county as a whole, and their median incomes are lower than the county average: one community is almost $9,000 lower; another, $5,000 lower than the county mean. The draft Columbia Basin Ecosystem Assessment stated that resource related jobs totaled only 4 percent in the region (Reyna 1998), yet there are numerous individual communities in which this total is considerably higher. These examples are offered not to suggest that the linkage between resource dependency and well-being at the county or regional level is unimportant but to show how aggregating data beyond a community can misleading. Whatever resource dependence there really is will more often than not be misstated.

If one desires to understand community well-being, then the unit of analysis must focus on and isolate community. County or regional data alone encompass too broad and diverse an area to be used for examination of well-being for most NRDCs. Moreover, the larger the aggregation, the less likely that measures (regardless of whether they are median income, poverty, or unemployment) can be accurately linked to resource management activities. A determination of causal or associational factors influencing community well-being often requires a specificity and detail unobtainable with county-level data, particularly when counties are large and heterogeneous.

A NEW APPROACH TO FOREST COMMUNITY WELL-BEING

The concept of community has engendered considerable debate, a debate that while it will not be resolved here must nonetheless be addressed. In sharp contrast, the concept of forest dependence has been uncritically accepted as meaning dependence on employment generated from timber harvesting. Amartya Sen’s novel “capabilities and functioning” approach to individual well-being can be expanded by adding an emphasis on the community. This expansion calls for the inclusion of culture and community when considering well-being which leads to the concept of capacity and how it can be used in an assessment of community well-being.

Conceptual Clarity

The Concept of Community—In this paper community is defined in terms of a place-based, shared identity. This definition is primarily based on Gusfield’s (1975) discussion of community, which includes the intersection of two components: relational and territorial. The relational component involves “the quality or character of human relationships,” which includes a sense of belonging. Selznick (1992) states that, among individuals, this includes shared beliefs, interests, and commitments that unite diverse groups and activities. The relational component of community is a vital part of individual well-being; it is discussed further later.

Gusfield’s territorial component involves what people have in common and share at their locale. This includes diverse institutional elements: governments and law, school districts, churches, and families, among other things (Selznick 1992). Gusfield’s concept of community roughly encompasses the three aspects for which Hillery (1955) in a survey of the literature, found definitional agreement: social interaction, area, and common ties. Although Gusfield does not limit his discussion to place-based communities, the emphasis here is primarily on geographical place-based, forest-dependent communities.

Despite this focus on locale, it is terribly important to recognize that forest communities are part of the larger society, and, in most cases, with extensive ties to outside organizations (Warren 1978). The presence and type of linkages can profoundly affect the opportunities residents have available to them or are able to develop themselves. A small rural community containing a mill owned by a multinational corporation may have additional mill-related employment and other opportunities. Yet, this same community will also be quite sensitive to the actions of the multinational, which may have no local ties beyond its mill.

Institutional and social relationships extend beyond the formal administrative and informal boundaries of a community (Selznick 1992; Strathern
1984). Individuals may hold multiple "community" identities as a result of associations at work and through organizations and institutions outside their community of residence. Small NRDCs include overlapping sets of social groups, and these groups are important to local community well-being and how local communities are influenced by resource policy. The focus on place-based communities suggested here provides a clear and critical starting point for assessing well-being.

**Broadening the Concept of Resource-Dependence and Recognizing the Importance of Sense of Place**—Forest-dependent communities are those immediately adjacent to forest land or with a high economic dependence on forest-based industries, including tourism as well as timber and non-timber forest products. This broader definition acknowledges that well-being involves more than a dependence on timber products.

"Forest-dependence" suggests that a community's primary relationship is to a biological forest and, as the concept is commonly used, to wood products. Forest-dependent communities rely on the biological forest resource, but communities in which a number of residents work in the wood and non-timber forest product industries depend also on an economic and social structure that permits and demands particular uses of the forest resource. This structure mediates the terms of a resident's access to the economic and social benefits of this resource. Thus, in a community with many workers employed in forest product industries, the residents' ability to gain economically from the forest, as well as their ability to create new jobs, is a function not only of the biological condition of the forest but of: (1) the extent to which controllers of the forest permit and promote commercial activities, (2) the extent to which those who create forest-related jobs make them available in or near the community as well as the extent to which those who control the jobs maintain these jobs, and (3) the terms upon which these jobs become available, and (4) the extent to which the market demands the forest products.

Also important to note, the commodity production perspective ignores forest-dependent communities that do not produce timber. Communities can be economically dependent on forest products without any forest-commodity production whatsoever. Communities whose *raison d'être* is forest tourism or retirement living are economically dependent on the forest for its amenity value, and their numbers and size are increasing throughout the United States.

In a similar vein, forest dependence may occur with no economic relationship whatsoever to the resource, based on aesthetic, symbolic, and locality-based importance (Hester 1985; Hiss 1990; Tuan 1993; Walter 1988). As such, the forest is a landscape and part of a human sense of place. As a landscape, Relph (1976:34) suggests, it represents "an expression of communally held beliefs and values and of interpersonal involvements." Meinig (1979:46) observes that "a well-cultivated sense of place is an important dimension of human well-being. Carried further, one may discover an implicit ideology that the individuality of places is a fundamental characteristic of subtle and immense importance to life on earth, that all human events take place, all problems are anchored in place, and ultimately can only be understood in such terms."

For example, Wendel (1987) found that a majority of residents of a forest community in California chose the response "the trees/the forest" when asked the most important place in the community. The trees and the forest represent a link with residents' past tradition of logging and a connection to their present and future economic base of tourism and to aesthetic values. Hester (1985) calls places that reinforce and help define the community living tradition "sacred" places. Kaufman and Kaufman (1946:30), using the term stability rather than well-being, state, "A meaningful tradition is always an important part of the life of a stable community. A tradition is needed . . . which magnifies the significance of the forest and portrays the relationship of forest and people." Berry (1987), in a somewhat similar vein, asserts that a lasting community is inseparable from its place, with community and place mutually supportive. A durable, resource-dependent community is only possible when the human economy is sensitive to and works within the constraints imposed by the natural economy. As a playground, sacred place, or resource, the forest supports local residents and contributes to the definition they have of themselves and their understanding of who they are. The lifeways of community members and the landscape are intertwined. Thus, when discussing dependence, one must recognize that the forest provides not only the means of production, diversely defined, but sustenance to the local living tradition, economically, socially, and spiritually.

**Individual Capabilities and Functionings: The Basis of Collective Capacity**

Amartya Sen (1984, 1985a, 1985b, 1987, 1993) offers what he calls the "capabilities and functionings" approach as an alternative way of evaluating well-being. Sen's approach to well-being counters the problem of the limitation of sociodemographic measures, such as measures of opulence, by evaluating not just the goods at one's disposal or one's wealth, but how they contribute to what a person can do. For Sen, individual capabilities consist of the freedom one has or the opportunities from which one can choose. An individual's functionings consist of one's achievements, or what he or she "succeeds in doing with the commodities and characteristics at his or her command." (Sen 1985b, p. 10). Functionings vary from the more basic, which include escaping death and malnourishment, to the more complex,
such as achieving self-respect (Sen 1993). Sen argues that these elements are part of an individual's being and must be part of a well-being assessment.

In the case of a forest community, a mill job that provides an adequate income may be essential to an individual's (and his or her family's) well-being. However, diminished well-being through reduced opportunity and achievement results if an individual is unable to obtain medical benefits, cannot advance in his or her job, or desires creative opportunities that are unavailable. A job that provides adequate pay contributes to one's well-being, but the pay constitutes only a portion of one's achievement. These examples highlight what Sen (1985:317) refers to as the "capacity to function."

The capabilities and functionings approach addresses the subjective-indicator problem by dividing the evaluation into two parts: ((i) specification of the functioning achievements, and (ii) the valuation of the functioning achievements" (1985b:30). Specification requires identifying achievements for which a valuation is made. To return to the example of a poor, unemployed, ill-fed, homeless person, the specification of her functionings would clearly indicate a low level of well-being, while the personal valuation of her well-being is rendered somewhat unimportant.

What is unique about Sen's capabilities and functionings approach is that it requires an analysis of the opportunities or freedom individuals have (capabilities), and their achievements or successes (functionings) in light of their opportunities. For someone to have a high level of well-being, she or he not only must feel well but also must have opportunities available and be able to take advantage of them. Sen, however, restricts the analysis of well-being to the individual and avoids the sticky problem of a contextually based valuation of various capabilities and functionings, which must be included for a more complete evaluation of well-being.

The Importance of Community-A complete discussion of individual opportunity, as well as a more effective valuation of functioning achievements and well-being, requires a focus on both the individual and community. Human actions are motivated by internalized values. Benn (1982:49-50) maintains these flow from "tradiotions of behavior," which do not reflect "individually conceived goals, but reflect those of our culture and communities." Selznick (1987:447) offers the perspective of the "implicated self," which holds that humans depend on others for personality development and "psychological sustenance." He (p. 451) states, "A morality of the implicated self builds on the understanding that our deepest and most important obligations flow from identity and relatedness, rather than consent." Bellah et al. (1985) and MacIntyre (1984) maintain that human identity is found in community, as a collective living tradition.

Accepting the perspectives of "traditions of behavior" and the "implicated self" requires a well-being assessment to examine how communities define success (or functionings). This, in turn, provides a referent from which individuals view and assess their own success. Native American or Latino communities may define success differently than Anglo communities. Ethnically similar communities' definitions of success may differ from one another for any number of reasons as well. Hence, beyond the most basic of functionings, proper assessment must recognize differences while recognizing that these differences must be reconciled in the context of community. A community, its traditions, and the opportunities it creates for residents, must inform well-being evaluation. To neglect the community is to neglect context and important—indeed vital—aspects of individuals.

A community of shared values does not equal a community of conformity (Lasch 1983:178), nor is it composed of separated individuals or groups. Lasch states that social solidarity is not "an identity of interests; it rests on public conversation. It rests on social and political arrangements that serve to encourage debate instead of foreclosing it." Communal relationships, with the associated responsibilities they bring, and the freedom to choose both are coveted values. As Selznick (1992:353) points out, there must be "freedom in associations as well as freedom of association." He adds that a concern for personal autonomy "... assume[s] that the worth of community is measured by the contribution it makes to the flourishing of unique and responsible persons. As an attribute of selfhood and of self-affirmation, autonomy requires commitment as well as choice."

The perspective of the implicated self also recognizes that taking part in the life of a community contributes to individual well-being. Humans are constituted by social relationships found in community, and there is a reciprocal and interdependent relationship between an individual and others in her or his community. This perspective implies that a collective good exists; well-being may be improved by residents working on community projects when, narrowly conceived, are of no benefit to them personally. Selznick (1992:350, 364), discussing communities as places where people grow and flourish, notes that a "flourishing community has high levels of participation: people are appropriately present, and expected to be present, on many different occasions and in many different roles and aspects."

Individual well-being increases with a heightened sense of being part of a community and making that community a better place to live. This is part of the "relatedness" component of community discussed above and involves a category of individual behaviors termed "commitments." More broadly, this behavior may be termed civic responsiveness. Sen would disagree with the extension of well-being analysis to include "commitment" behaviors. Because of the importance of his work for the approach developed here, a brief review of this disagreement and a response to it are presented in Appendix I.
Sen (1990) nonetheless recognizes the importance of community to well-being, stating, "Some functionings are very elementary... others may be more complex but still widely valued such as achieving self-respect, or taking part in the life of the community."

**Well-Being Assessment**

Amartya Sen’s approach to well-being requires an assessment of individual opportunities (capacities) and achievements or successes (functionings) in light of available opportunities. For large-scale ecosystem studies, or evaluation of well-being in a forest community, it is impractical if not impossible to evaluate opportunities and successes for each individual. Diverse secondary data combined with primary data about communities (including such things as support services) can be used to develop a rudimentary understanding of conditions. Useful secondary measures to assess condition and rudimentary functioning include but are not limited to: measures of poverty that identify those who have not secured an income adequate to escape it (escaping poverty being a very basic functioning); poverty intensity (i.e., the farther below a poverty threshold, the higher the intensity) suggestive of a lower level of functioning and greater need; and higher education levels and home ownership, which are suggestive of increased opportunities and higher functioning. Equally important, the presence of individuals with high levels of education may lead to increased community capacity for reasons that are discussed below. Crime, drug dependency, and children in families receiving public assistance are additional measures of conditions that may affect functioning and are reflective of residents’ well-being.

**Community Capacity**

Because individual opportunities and functioning are shaped by conditions individuals face within a community, a well-being analysis must focus not only on the static condition of a community’s residents, but also on their dynamic capability to create local opportunities and respond to local needs. A more complete analysis of well-being, therefore, includes an assessment of residents’ capability to collectively affect community opportunities. This dynamic capability is community capacity.

Community capacity encompasses residents’ ability to respond to external and internal stresses; to create and take advantage of opportunities; and to meet the diverse needs of residents. It refers also to a community’s ability to respond and positively adapt to a variety of circumstances. Community capacity is comprised of three broad areas: (1) physical capital, which includes physical elements and resources in a community (e.g., sewer systems, open space, business parks, housing stock, schools, etc.); (2) financial capital, which is locally accessible capital and credit; (3) human capital, which includes the skills, education, experiences, and general abilities of residents; (4) cultural capital, which is the myths, beliefs, and norms that organize groups and facilitate survival; and (5) social capital, which includes the ability and willingness of residents to work together toward community goals. Social capital includes networks and trust that facilitate coordination and cooperation for mutual benefit. Cultural and social capital overlap somewhat, but they are not the same. Social capital appears to be one of the most important determinants of capacity.

Robert Putnam’s (1993a) empirical work makes clear the importance of social capital and how it is a critical determinant of economic development and community capacity. Putnam (1993b), examining the modern-day rise of regional governments in Italy from the 11th century, states:

> The historical roots of the civic community are astonishingly deep... communities did not become civic because they were rich. The historical record strongly suggests precisely the opposite: They have become rich because they were civic. The social capital embodied in norms and networks of civic engagement seems to be a precondition for economic development, as well as for effective government.

An example is offered to explicate the role and importance of social capital and to show the relationship between social and financial capital. A community may have a number of residents who are quite wealthy, but if they are disinterested and detached from local matters, their financial capital does little for the community beyond their narrow self-interest concerns. Conversely, in a community with little financial capital but high social capital, residents voluntarily come together to address local needs and will conduct fundraisers as well as reach outside the community to raise money if it is needed.

**Assessing Capacity**—Assessing community capacity is complex and involves evaluating residents’ ability to meet needs and create local opportunities. It involves assessing local “commitment” behaviors and the presence of civic groups, along with physical and human capital. To assess social capital alone, Putnam (1993a) noted, requires diverse slices of data examined over time.

In their assessment of communities for the Sierra Nevada Ecosystem Project (1996) and for the Forest Service for the Klamath Region (1997), Doak and Kuser, in addition to collecting socioeconomic data, assessed community capacity through workshops with experts knowledgeable about local communities. Individually and collectively, local experts assessed physical (including financial), human, and social capital and the interplay of them to...
arrive at a measure of capacity for a community. Selecting of experts to participate in workshops proved critical, as it determined the accuracy and quality of information obtained. In choosing workshop participants, Doak and Kusel learned that experts must understand community issues, institutions, and resources, but that effective workshops required experts who were not community boosters or overly partisan about issues.

Assessing community capacity makes it easier to understand the potential for increased opportunities for productive and rewarding involvement in a community. Though such assessment does not specify how any single individual’s well-being is affected, high community capacity itself suggests higher levels of well-being for residents. High capacity suggests, too, that expanding opportunities to meet community needs (and local well-being) is not only possible but likely.

With the continued shifting of responsibilities from state and federal entities to localities and the increased responsibility placed on locals for self-development and improvement—including communities that have long relied on federal and state subsidies for infrastructure development and maintenance—examining community capacity is an important facet of community well-being research.

CONCLUSION:
FOREST COMMUNITY WELL-BEING

This review of well-being studies makes it clear there is room for considerable improvement in forest and natural resource-dependent community well-being assessment. Future studies of well-being cannot rely solely on incomplete subjective reports of well-being; exclusive reliance on measures of opulence such as income are equally limiting because they fail to address distribution issues or resource control. Additionally, if researchers are to discuss resource dependency and well-being, they must be clear about what “dependency” means and the many ways resources may be valued. The forest as a “place” embodies a diverse array of values. If a local forest, long used as a locale for the production of wood products, is reserved exclusively for recreational use or is overcut, local well-being will decline through the diminution of socially important forest values (not to mention jobs).

Researchers need to recognize that the link between resource dependency and well-being is not straightforward, nor can it be assumed; it requires empirical examination. Resource harvesting and extraction, whether they involve minerals, timber, or agricultural products, have social consequences. The manner in which these activities are organized and carried out, including who controls the resources, who manages the benefits and determines when and how locals participate in resource management, and the condition of the resources that remain have significant implications for community well-being in the short- and long-term.

Researchers also must be clear about the unit of analysis. Assessment of community well-being cannot be limited to county or regional analyses. Counties are too heterogeneous; too often jobs associated with resources comprise a small proportion of a county economy. Communities are a logical unit of study but pose methodological problems: clear identification of boundaries is often difficult and the data available within those boundaries may be limited. Well-being assessment must often strike a balance between socially meaningful units of analysis and units for which good data are available.

Communities must not only be thought of as a unit of analysis but also included as part of well-being assessment. Including a behavior category termed “commitments” broadens the concept of well-being in two significant ways. First, it acknowledges that capabilities and functionings are in part defined by the community. Communities are composed of and sustained by individuals, and individuals are shaped by their community. Viewed in this light, consideration must be given to how community—defined here as a locality-based collection of individuals—fosters or inhibits individual thinking about capabilities and individual ability to function. Hence local conditions are viewed as influencing on individual conceptualizations of well-being. A second implication of a broadened concept of well-being is that relationships within a community involve a component of responsibility to communal relationships. This involves practices of commitment that make up patterns of individual allegiance and responsibility directed towards community. These practices profoundly affect well-being.

In broad-scale ecosystem studies it is simply not possible to assess the resources each individual has and determine how they contribute to his or her functioning. An assessment of community capacity allows researchers to assess in some measure the opportunities available to residents today as well as their potential for creating additional opportunities and improving well-being. A basic assumption is that the higher the capacity of a community, the more it is likely that opportunities exist or will be created to expand individual capabilities and functioning. The very act of community capacity building is not only opportunity enhancing but itself leads to improved social well-being.

The emphasis on individuals, local community, and capacity does not mean that social and political arrangements beyond community boundaries should be ignored. They are an important—and in many cases a critical—component of capacity and local well-being. This is particularly true of forest communities where local and nearby land is owned and local jobs controlled by nonresidents. Actions originating outside of a community may contribute to or severely restrict local residents’ capabilities and functionings. For ex-
ample, local capabilities may be reduced by forest management decisions that neither involve local residents nor take into account local needs. Good capacity assessment will identify these arrangements. Improving a community's ability to respond positively to unfavourable decisions made outside community boundaries reflects the capacity of a community and is another way of improving the well-being of community residents.

What is unique about this approach to the study of community well-being is that it involves both an analysis of factors that reduce local well-being and an analysis of season of individuals and their communities respond to these factors. This assessment of capacity also encompasses an examination of how individuals and communities create opportunities or to use Sen's terminology, capabilities that expand the possible functioning or achievements of community members and improve well-being. In addition to identifying general levels of individual and community well-being, one of the significant benefits of this approach is its identification of areas with low capacities and a reduced ability to self-develop and improve local well-being. It is these areas that require the most attention and will provide the most difficult challenges for those serious about improving the health of the ecosystem and the well-being of humans and human communities.

NOTES

1. The commonly held misconception of community stability calls for a steady flow of timber products, primarily logs, to ensure stable employment in the timber industry, which, in turn, leads to community well-being. Community stability, however, was once conceived in much broader terms (see Dana 1981; Kaufman and Kaufman 1946). Beginning in the late 1920s, however, the term became inextricably linked to timber industry employment in U.S. Forest Service discussions of sustained-yield forest management (Fortmann et al. 1989).

2. This was one of three teams created by President Clinton to ‘identify management alternatives that attain the greatest economic and social contribution from the forests of the region and meet all requirements of applicable laws and regulations’ (FEMAT 1993, ii).

3. See Lee et al. (1990) for a discussion of these concepts for forest communities.

4. Warren's (1978) observation that ties between organizations within a community (horizontal linkages) have been overwhelmed by ties to organizations and institutions outside the community (vertical linkages) is relevant here. Warren argued that the influence of an increasingly urban society frequently results in a decline of a community’s distinctiveness, self-sufficiency, and individual interactions.

5. Machlis and Force (1988) point out that forest or timber dependency is generally determined by forest commodity production or economic measures (e.g., measures of sales by forest industries, percentage of total income from the forestry sector, and forest industry employment).

6. See Wall et al. (1998) for an exposition of alternative concepts of social capital.

REFERENCES


**APPENDIX I**

Sen (1987:28) ignores “commitments” in the calculus of personal well-being. He does so by making a distinction between actions based on “sympathy,” which are included in calculations of well-being, and actions based on “commitment,” which are not. Sen includes “commitments” in a category called “agency achievement” (1987:28) or “agency freedom” (1985a:203). According to Sen (1985a:203), “agency achievement” is a more inclusive category than personal well-being and includes “what a person is free to do and achieve in pursuit of whatever goals or values he or she regards as important.” He points out (1987:28) that by expanding the focus of attention and including “commitments,” we move from “personal well-being” to “agency achievement.”

Sen defines “sympathy” as help provided to an individual that makes the helper “feel—and indeed be—better off.” This increases one’s personal well-being. The behavior category of “commitments,” on the other hand, involves personal action (it too may be help provided to another), which Sen states, “in the net, [is not] beneficial to the agent himself.” Sen adds, “This would put action outside the range of promoting one’s own well-being.”

Sen’s rejection of an action because it is “in the net” not “beneficial to the agent himself” involves an evaluation of action (and its consequences) after the fact, or a prediction of its outcomes. Although Sen states (1987:28) he is
concerned with effects, he does not discuss at what point this calculation should take place nor what measures should be made to determine whether a behavior is beneficial or not. Given the nature of his decision rule, Sen ignores the motivation for individual action. Both categories of behavior, "commitments" and "sympathies," may involve action for which the motivation stems from the desire to help another person. Actions to improve one's community that do not have the "effect" of contributing to one's well-being therefore are not included in Sen's well-being calculations. In this manner Sen ignores historical, social, and societal forces that not only influence action (and motivations for action) but influence value decisions implicitly in the evaluation of well-being.

Etzioni (1988:40-45) states that the category of action called "commitments" is moral behavior. This is because such action is based on intentions, not consequences or effects. Intentions may also be considered the "intrinsic character" of action and are taken here to be the primary criteria by which to evaluate it, because the consequences of action may not be predictable. This valutational approach is central to a deontological social philosophy (Etzioni 1988; Hazard 1988).