Public Perceptions of Landscape Design as a Nursery Industry Service and Quality-of-Life Enhancement Factor[1]

Steven N. Rodie and Ellen T. Paparozzi[2]
Department of Horticulture, University of Nebraska
Lincoln NE 68583-0724

Abstract

Using a focus group approach, Midwest homeowners in Lincoln and Omaha, Nebraska, with recent experience and exposure to landscape design services were interviewed to assess their perceptions of the quality of available design services. In general, participants were pleased with their design experience and the quality of service provided to them. Poor communication between participants and landscape designers or landscape architects was commonly voiced as a key service limitation. Lack of homeowner knowledge of the design process was also identified as a limitation to good design, but to a lesser extent. Additionally, participants identified a variety of correlations between their landscapes and the potential for enhanced quality-of-life (QOL). Although not typically perceived as a critical singular QOL enhancement factor such as availability of food or medical care, quality landscape design appears to cumulatively enhance QOL in a significant way due to the wide variety of human needs that well-designed outdoor spaces can address.

Index words: focus group, environmental preference.

Significance to the Nursery Industry

Human interaction with nature (particularly plants) has long been assumed to be an important component of QOL, and recent studies have confirmed that contact with nature can provide many physical and psychological benefits. Residential landscapes represent an important context for potential nature contact. This study was conducted to obtain a sample of Midwest homeowner's thoughts and opinions on landscape design services as well as perceptions on the role of their landscapes in QOL enhancement. The results indicate that residential yards and gardens can promote enhanced QOL. The study findings also support the notion that proper residential landscape arrangement and content (i.e., effective, quality design) can increase a landscape's potential to enhance QOL. These findings are expected to result in the development of information that will:

- assist the landscape horticulture industry in better understanding clientele expectations,
- provide a focus on public education needs relative to the potential benefits of design,
- further measure public awareness and perceptions of landscape design, especially as it relates to enhancing QOL, and
- assist with the development of further focused research relative to QOL and landscape design linkages.

Introduction

Quality-of-life (QOL) has been examined from many perspectives in recent years, and has become a key component in efforts to quantify societal happiness and fulfillment. Worldwide efforts to measure QOL in the first half of this century were focused on Gross National Product (GNP); higher GNP was assumed to automatically equal higher QOL (28). As GNP grew for many nations after World War II, however, it became apparent that QOL was not an automatic by-product, especially in light of the environmental damage that was occurring with increased industrialization and urban growth (19). The development of social indicators, which address social and environmental issues beyond GNP, became an integral portion of QOL measurement (28). A variety of fields, including economics, marketing, ecology, and public health, have examined QOL and the role of social indicators in efforts to better establish a theoretical base for political, environmental and medical decision-making (25).

Not only have differences in research methodologies between fields complicated QOL measurement, but the use of both objective and subjective indicators has also created conflicts. Measurement of such things as literacy, infant mortality and life expectancy used to develop a physical QOL index (19) or identification of health issues as a sole means of identifying patient QOL perceptions (8) exemplify the application of objective indicators. 'Best Places to Live' surveys are another example of applying objective information to identify locations with high QOL (4). Much of QOL research now focuses on the use of more self-oriented and subjective criteria, such as happiness, contentment, and fulfillment of personal potential (6), although the need for quantifiable information remains critical for many of the marketing-driven uses of QOL data.

Quality-of-life in urban and suburban areas has received significant attention from researchers in light of the complexities of urban living and the high rates of growth in suburban areas (2). Four approaches to QOL analysis in urban areas are typically recognized in recent literature (18). They include:

- the personal well-being approach which measures life-satisfaction of individuals (the approach taken in this study),
- the community trends approach which focuses on QOL components and trends within the community,
- the livability comparisons approach which focuses on comparing different urban areas according to a number of objective indicators assumed to reflect QOL, and
- the market/resident approach in which housing price and/or wage differentials are theorized to compensate for QOL differences between urban areas.

[1]Received for publication June 25, 1998; in revised form November 16, 1998. This research was funded in part by a grant from **The Horticultural Research Institute, 1250 I St., NW, Suite 500, Washington, DC 20005**. Gifts given as participant incentives were donated by the Nebraska Nursery and Landscape Association and Campbell's Nurseries, Lincoln, NE. Published as Journal Series No. 12282, Nebraska Agricultural Research Division.

[2]Assistant Professor and Professor, respectively.

Residential environments have received a substantial share of QOL and preference assessment due in part to the acknowledged importance of housing in QOL perceptions (30). The outdoor component of housing, however, which includes the surrounding yard and garden areas, has received limited study, as has the role of the design of these spaces. Instead, factors such as room size, quality of building structure or heating system, or relative building costs, have been assessed (5). Neighborhood and community considerations for aesthetics, tidiness, parks, etc. have also been included in QOL studies but typically do not overlap into the private outdoor spaces within a neighborhood (5, 16). In addition, a wide variety of studies correlating human well-being with exposure to plants and nature have been completed. These correlations have addressed human and plant/nature connections as well as human and design-related issues (refer to Table 1 for a representative summary of these studies). In spite of the breadth of this information, however, connections to QOL have yet to be thoroughly documented.

Perhaps the most important component in establishing a theoretical relationship between landscape design and QOL is the role that a landscape can potentially play in meeting human needs. Csikszentmihalyi (7) believes that the enjoyment achieved in everyday life is the key to QOL, and defines our ultimate enjoyable experiences as 'flow' experiences. During these experiences, concentration is intense, the sense of time is distorted, self-consciousness disappears, skills are required and stretched, an ultimate goal is strived for, and the unpleasant aspects of life are forgotten. Many of the relationships and activities that people describe relative to landscapes and gardens (15) reflect these characteristics. Maslow's hierarchy of human needs model (17), which has served as a structure for QOL theory development (25) and community gardening/QOL research (29), reflects a progression of five levels of development as humans reach their full potential (and assumed life satisfaction). They include physiological, safety, social, esteem, and self-actualization. Table 2 briefly summarizes the relationship of landscape-associated issues with the development levels. As illustrated, the characteristics and potential activities associated with landscape interaction are highly diverse and cover the full range of human needs, including the higher levels that are considered more difficult to achieve.

Maslow also believed that satisfaction of cognitive need (the need to know and understand the world around us) and aesthetic need (beautiful surroundings satisfy a proven human craving for beauty) are important in the process of meeting human hierarchical needs (17). Many of the principles deemed important for successful landscape design (i.e., order, unity, balance, use of texture and color, etc.) (3) are directly associated with the satisfaction of cognitive and aesthetic needs, which further strengthens the theoretical relationship between QOL and design.

Public interest in landscape design has grown significantly in recent years and, as a result, has put increased pressure on landscape designers and landscape architects to provide ser-

Table 1. Survey of literature referencing human connections with plants and nature and landscape design considerations.

Information/findings	Reference to cited literature
Human connections with plants and nature	
The presence of nature in urban areas has been shown to be a vital restorative factor for human mental and physical well-being	11, 27
Vegetation affects people's emotional reactions to urban areas (more positive feelings when viewing tree-lined city streets), and raised expectations of QOL for the area	24
Residential satisfaction is strongly related to the availability of nearby nature, as is life satisfaction (nature availability was second only to marital role as an important factor in a national survey)	12
Urban places with vegetation are liked better than those without	24
People viewing nature scenes experienced a general increase in positive emotions	24, 27
Gardens can serve to 'compress' nature into small areas, creating high levels of fascination (a restorative factor) and providing people with important connections to nature and experiences with life cycle and other natural processes	10
Individuals involved with community gardening have increased their self-esteem, enjoyed economic and psychological benefits, increased social interaction, and were able to meet self-actualization needs	29
Urban forests play a role in building stronger urban communities and reducing violence	14
Landscape design considerations	
Landscape trees were shown to increase sale prices for houses by 3.5%–4.5%	1
The four visual attributes of upkeep, ornateness, openness and clarity, which closely correlate to sound design principles, were shown to be associated with visual environmental preference	20
Plant arrangement in a 'parkland' setting and the context created by the vegetation is more important to people's experience of the landscape than the presence of the individual plants	12
Landscape vegetation plays a role in noise reduction (screening of noise source), moderating temperatures and winds, landscape ornament/decoration, addition of smells/fragrances, generating natural sounds, screening of glare and unsightly features, space definition, and adding visual diversity/interest	26

Table 2. Comparisons of landscape issues and Maslow's hierarchy of needs.

Level	Hierarchy description	Needs met by landscape
High	Self-actualization (doing what an individual is 'fitted' for, self-fulfillment, being true to own nature)	context for inherent human desire to connect with nature, nurture living things
	Esteem (self-respect, high self-evaluation, achievement, adequacy, appreciation)	creation of beauty, chance to be creative, pride in ownership, reflection of personality for public display
Moderate	Belongingness/Love (relations with people in general, having a place in the group or family)	setting for family activities and outdoor entertaining
	Safety (security, stability, protection, freedom from fear, anxiety and chaos, preference for the familiar, need for structure and order)	sense of privacy, extension of 'home comforts' and security from an indoor setting to an outdoor setting
Low	Physiological (food, thirst, sex, touch, sleep, activity)	exercise, sensory stimulation, food, proximity to water

vices for creating residential landscapes. The National Gardening Association sponsors a yearly poll conducted by the Gallup Organization to assess trends in expenditures for landscape products and services (22). Results summarized in 1997 indicate that expenditures for landscape design have gone up 150% from 1993 through 1996 ($0.4 billion to $1.0 billion), whereas other categories, including lawn/landscape maintenance, landscape installation/construction, and tree care, have only slightly increased or decreased. The average amount spent per household for design has almost doubled during the same three-year period.

In an earlier related study completed in 1967, public perceptions and reactions to landscaping were analyzed for the Horticultural Research Institute (9). This study identified several key areas deemed critical to the industry's future marketing success, including the development of landscaping from a socially-accepted value to a personal value, and the importance of selling not just product (plants) but experiences and activities (including outdoor living and caring for living things). It seems that many of these same 30-year-old issues exist in today's expanded design market, and few efforts have been made to understand them more fully.

The purpose of this study addressed four objectives, including:

- the examination of customer satisfaction relative to their experiences with landscape design services,
- the investigation of the perceived relationship between landscape design and QOL,
- the identification of the educational needs of customers, landscape architects and landscape designers required to better facilitate the landscape design process, and
- the identification of other important design- and service-related issues which affect residential landscapes.

Materials and Methods

Qualitative research basis. A group interview/focus group approach was used to gather ideas and opinions for the study. Although focus groups have been shown to be effective in explaining how people regard an experience, idea or event (13), the inherent qualitative nature of focus group studies precludes the extrapolation of results (especially of a statistical nature) to larger populations. Any generalizations drawn from this study to the public at-large should be limited to other urban homeowners in the Eastern Nebraska region who also have recent experience with industry landscape design services.

Focus group participant selection. We used a relatively small group size to facilitate more complete expressions of opinions and ideas from each participant, and set our goal at seven participants per session. In order to obtain information from a regional audience, individuals were recruited from both Omaha and Lincoln, Nebraska. The cities are located approximately 50 miles apart in Eastern Nebraska and represent the two largest urban populations in the state. Four sessions were scheduled (three evening and one afternoon; three in Omaha and one in Lincoln) to enhance participant diversity and number of responses. Thirty-five people were recruited, but 22 ultimately participated.

Participants were selected from landscape design clientele lists provided by twelve nurseries and garden centers of various sizes in Omaha and Lincoln. If they agreed to participate in the study, individuals were matched to sessions that would maximize group diversity. Two of the sessions included married couples; the remainder of participants attended the sessions as single representatives of their landscapes and their families. Of the four sessions held, two had seven, one had six, and one session (afternoon) had two participants. Follow-up letters of confirmation were sent to all participants as a reminder of their session appointment.

Session content and structure. Each focus group session lasted two hours. Refreshments were provided and a ten-minute break occurred halfway through each session. After initial introductions and instructions were completed, five activities were coordinated in each session. They included a showing of typical residential landscape photos to initiate group discussion, group development of a list of characteristics of good landscape design, discussion of selecting and working with a landscape designer or landscape architect, individual picture drawing and discussion of home landscapes, and discussion of quality-of-life and its potential relationship to designed residential landscapes. Each session was concluded with participants writing hypothetical letters expressing their ideas on how landscape designers and landscape architects could serve consumers more effectively. Moderator and author notes, combined with transcripts developed from session audio taping, documented the information collected.

Results and Discussion

Landscape photograph overview. In the initial discussion of typical landscape photographs, the participants seemed to generally agree on whether a landscape was 'good' or 'bad,'

although variation occurred both within the groups and between groups. These responses paralleled two premises previously identified in landscape research: certain factors in landscapes seem to be universally appealing (such as water, neatness, and color), and the more the landscape contains human-made elements, the greater the variance in preference (23).

Definition of 'good' landscape design. Table 3 summarizes the characteristics and traits of 'good' landscape design that were shared in the four focus groups. The responses were summarized into eight general categories. Feelings/philosophy, function and aesthetics/design principles contained the most responses, while no references were made to design issues that correlated to socializing and people.

In summary, good design feels comfortable, functions well and looks/smells good. This result appears to indicate a bias toward design factors that enhance looking at or experiencing a landscape rather than creating a living/socializing/entertaining space. In addition, many responses to good design were related to maintenance considerations.

Design assistance discussion. Many participants obtained professional design assistance because of a lack of expertise, although some were satisfied with their own general efforts but needed help with a specific project or area. Factors in selecting a company for design assistance included recommendations from friends and neighbors, seeing a landscape and asking the owner who did it, positive past experiences with the company (including long-lived plant materials) and doing 'homework' through comparison of company advertising or design sketches.

There appeared to be a variety of levels of homeowner participation in the design process, as well as a variety of approaches used by designers to solicit input. Refer to the section entitled *Comments to the landscape industry and design professionals* for a summary of participant comments addressing design issues and concerns.

Most individuals felt that landscape plans should cost around $25–50, with $100–200 as a maximum. They did not perceive landscape design as a service, however, but rather as a product (i.e., the plan). When asked, many participants said they would consider paying a separate design fee as long as it wasn't more than the above amounts. It is interesting to note that these responses closely parallel the results of a survey conducted by the National Landscape Association in 1978 (21). Of the 157 landscape firms that responded, 86% charged for plans (an average flat fee of $62 with a range of $25–$50 for simpler plans to $150–$250 for complex plans). Hourly charges (at an average charge of $18.50/hr.) were used by a smaller percentage of firms.

Interestingly, almost all participants recognized that they were paying for the plan by buying the plants. They recognized it as a rebate issue and liked the idea. One participant felt that providing a rebate for the plan expense was an excellent way to assure a company that it would have future business—the 'guilt factor' of 'owing' the nursery or garden center business in return for the plan had prompted their return to the company numerous times for more materials and plants.

Comments that participants would make to a friend considering professional landscape design services included such things as: be aware of uncommunicated details, watch for conflicts with pre-installed irrigation (move it to match changes in turfgrass areas), be aware of moisture accumulation when using a weed barrier or mulch, and know that you can phase in a landscape plan over 3 to 5 years.

Landscape picture-drawing. When asked to draw a picture of their landscape, 19 out of 21 individuals drew their backyard. Many had animals and people pictured in them, and most related how they lived in their yard, e.g., feeding birds, watching butterflies, grilling, eating and entertaining, play activities, relaxing, etc. These results provide evidence for the importance of a landscape for personal and family activities, social interaction with non-family, and interaction

Table 3. Characteristics and traits of 'good' landscape design.

General characteristic category	Participant-defined characteristics
Feeling/Philosophy	feels good; soothing; relaxing (2); personality reflected in yard; should relax you; serene; not bland—a surprise
Living Space	extension of inside; how much do you want to be involved with your yard?
Maintenance	maintenance in relation to how much pleasure it can return; low maintenance; fits how you care for your yard and how much you want to do; lack of needing water; water-conserving; lots of mulch
Function	kids/no kids; who is using it?; privacy; should serve a purpose; function, i.e. windbreak; fit needs of family; proper drainage; flexibility-design that can change; designed for the property (terrain, slope uses), siting things so they can be enjoyed; fragrance
Design Principles/Aesthetics	smooth flow for eyes, no interruptions/fluid; balanced (2); color (selected); organized; neat and well-cared for; contours and shapes, not just lines; blend with surroundings, fit with neighborhood; color (3); texture; fit the house/architecture; natural flow; seasonal color—plants for all seasons; size and proportion; variety; architecture and design need to coordinate; formal vs. informal
Design Elements	water—pools, fountains; water feature; outside lighting; use of natural materials
Nature Components/Activities	diversity of plants; attracting butterflies, birds, wildlife; natural look even though planned; perennials
Socializing/People	no responses

Table 4. Landscape characteristics and traits associated with quality-of-life.

General characteristic category	Participant-defined characteristics
Feeling/Philosophy	landscape makes me feel whole instead of fragmented, brings peace, lowers blood pressure; landscape makes me remember there's an 'aura' to the world; peaceful; quiet; enhancement of time; pride (2); it's part of me; enjoy my yard; enjoy time outside; leisure time; creativity; solitude; peaceful; pride of ownership; cocooning; give something back to the earth; enjoyment of working the earth; pleasure in watching growth; closeness to God; comfort(2); peaceful surroundings; tranquility; relaxation; living life and dignity; health; home; peacefulness; enjoying life
Living Space	landscape and inside living space flow together; space
Maintenance	reduced maintenance/'safe' maintenance; low maintenance
Function	be able to sit inside and look out; more related to looking at than being in (at present); providing for shade outside can make house too dark inside; important to bring light inside; hobby (3); no noisy traffic; sounds (2); fragrance; security; safety; outdoor activities; reading; sunbathing; sound of water; night lighting; get kids out of house; exercise; recreation
Design Principles/Aesthetics	looking outside and seeing a mess reduces QOL; blended colors; contrasted colors; color (3); pleasant to look at other well-designed yards; night/day; appeal of colors; beauty; changeable colors; harmony
Design Elements	swing; garden
Nature Components/Activities	trees (2); flowers (2); wildlife (2); attract wildlife, birds, insects (2); birds (2); change of season; nature (squirrels, birds); earthy smell; fragrant flowers; sunshine and soft wind; natural beauty; ecology
Socializing/People	neighbors; inclined to invite people over; compliments; knowing people enjoy your flowers; entertain (2); comfortable setting for entertaining; hospitality; loved ones; friends; family activities; eat with friends

with nature. In contrast, when a front yard was discussed, it was typically addressed as an important reflection of pride and self-image.

Quality-of-life (QOL) discussion. Many participants agreed that a landscape can play a major role in QOL enhancement. Table 4 summarizes the responses received during the group discussions on QOL associations with landscapes. The category of Feeling/Philosophy contained approximately one-third of all responses. Comments such as 'soothing, relaxing, feeling whole instead of fragmented, pride of ownership, closeness to God, and pleasure in watching growth' illustrate the range and depth of responses offered by participants. Many of these emotional and restorative benefits associated with landscapes have been widely identified in past research (11, 15). Participants also mentioned the functionality of the landscape as an important contributing factor to QOL, as was a connection to nature and the socialization potential of the landscape.

Comments to the landscape industry and design professionals. The general comments to the nursery industry were brief. Participants indicated that nurseries should be professional, knowledgeable and flexible. They should be aware of new trends in plant material and have trained employees on hand during all hours the store is open.

Comments to landscape designers and architects were more detailed. For purposes of analysis, these comments were grouped into four categories, including 1) the first contact with the client, 2) the on-site visit to the client's house, 3) the personal qualities/characteristics of a good landscape designer, and 4) general comments.

A successful first contact typically incorporated examples of previous work and a list of referrals (including access to completed landscapes that could be visited or viewed). In order to conduct a successful site visit, a designer should listen well and ask a wide variety of pertinent questions in regard to lifestyle requirements and personal needs/desires. Highlighted characteristics of a good designer included flexibility, attentiveness to client needs, plant and maintenance expertise, and a willingness to really get to know the client. General items of importance included in the participant comments included designer knowledge of functional issues (such as drainage), individuality in design style, a designer's ability to provide long-term views/insights, and an ability and willingness to develop a long-term relationship with a client. Refer to Table 5 for a detailed listing of comments.

The major theme of the letters and comments was that participants want designers that listen to them, are willing (and have the time) to get to know them, and are able to develop designs that suit their personalities and life-styles. Lack of communication (or mis-communication), cited numerous times by group participants, was the single most important issue leading to design success or failure.

Discussion of findings and their applications. In general, the participants were pleased with both the design services they had received and the quality of their designed landscape. Unsatisfactory experiences typically related to a lack of communication with the designer, a sense that they were not given the appropriate time/attention (which led to unaddressed needs, unplanned maintenance requirements, and improper plant selection), and an inability to develop a long-term relationship with the designer/company. It appears that not only would an improvement in designer communication skills be beneficial (both in interpersonal skills and in which questions to ask homeowners), but an improvement in homeowner communication skills is also needed. In addition to on-going efforts in extension education which address the public's understanding of design, a more pro-active approach by the industry in educating clientele might also prove beneficial. Finding additional time for designers to form deeper relationships with clientele is a difficult consideration in light of hectic planting seasons and increased market demand, but

Table 5. Participant comments to landscape designers and landscape architects.

Comment category	Comments
First client contact	Initially, give a list of completed landscapes that people could see and referrals (names and phone numbers) to call; show me what you've done using photographs or slides; and let me fill out a survey or other interest indicator.
On-site visit	Listen and ask a lot of demographic questions (design and age of home, homeowner and family); do you like native plants or other plants, shade vs sun , color, flowers (what types?); do you want to keep any current plantings?; space use and aesthetic issues such as privacy needs, 'fit' within the neighborhood, amount/use of outdoor space, children's activities and pets; wildlife interests; maintenance considerations.
Designer qualities and characteristics	One who accommodates the customers; instructs in proper plant care; seeks input; knows plant material, particularly cultivars and climate limits; spends time, has patience; doesn't take over the project by telling client what they can have; remembers resale value is important; function of the landscape is to be an enhancer (a problem when it isn't); gets to know the client well enough to understand, including what the client grew up with, how they live, how they will use and will not use their space, how much maintenance they will give the landscape, what their lifestyle is—family , social, mix and where they will use the landscape—is the front just for looks?
General	Designers must go over the final plan in great detail; they should pay attention to home details such as drains, faucets, window wells, window views, and moving irrigation; they should actually measure the yard; they should be creating an individual design, not just a cookie-cutter/rubber stamp type to suit their plant inventories; they should inform the customer and make far-sighted suggestions in regard to 10 or 15 years hence; give full service—don't just plant and run—most customers want a long term relationship; is the design safe for children and animals?; get training or hire other people (companies) who really know how to build decks, do lighting and create ponds.

allowances for relationship building would likely help develop a more profitable long-term client base.

Participants in general perceived design as a product, not as a service or investment. Those who had formed long-term relationships with a designer and company derived the greatest satisfaction from their landscapes and saw design as a worthwhile investment that paid dividends in home enjoyment. Many felt that design should cost little or 'nothing' and be rebated with the purchase of plants, but simultaneously acknowledged the potential of a good plan to increase their living enjoyment. Paying a nominal separate design fee was acceptable to some participants, particularly those who saw design as a service rather than a product. Other participants were ready to or had already paid substantially more money than the average fee ($50–$100) for a design and felt 'you get what you pay for.' It appeared that a majority of the participants willing to pay for design had been through the process before and appreciated what went into the effort. These findings highlight the need for additional consumer education on the true value of good design and the potential for increased consumer acceptance of paying fees for landscape design provided a tangible quality service experience and quality landscape plan are delivered in return.

There appear to be linkages between 'good' landscape design and QOL perceptions. When Tables 3 and 4 were compared, several categories in each table incorporated similarly high percentages of responses. Feelings/Philosophy, Design Principles/Aesthetics, and Function contained the most responses for both good design and QOL. Although qualitative in nature, this comparison appears to support a linkage between the two sets of perceptions. Interestingly, two other areas also noted as important for QOL—nature components/activities and socializing/people—were among the lowest good design category responses. Although not recognized by the focus group participants, these issues are important considerations for good design, both as factors in the design process and as integral characteristics of the completed project. This incongruity points to a need for an enhanced public awareness of what constitutes good design. Clientele made aware of what good design encompasses may be more likely to acknowledge its value and complexity, and appreciate the time and experience required to effectively develop good design.

Many landscape-related QOL factors can occur without formal design or even with implementation of poor-quality design. Good landscape design, however, has a critical role in enhancing or maximizing the potential QOL benefits associated with landscaping and plants. For example, seasonal color change or fragrance for many plants will at least partially occur and be accessible almost anywhere the plants are placed in the landscape. 'Good' design will additionally direct placement of plants where their color and/or fragrance can be best developed and enjoyed. In addition to maximizing the enjoyment of plant materials, elements in virtually all of the categories of QOL issues (i.e., landscape functionality, nature/habitat enjoyment, comfortable context for family activities and entertaining, etc.) are primary components of the landscape design process and can be enhanced in value if they are included and recognized in the design process.

The creation of outdoor living space is an important focus of landscape design education and integrates many identified QOL factors (such as privacy, outdoor entertaining, hospitality, family activities, etc.), but outdoor space definition/creation was not a priority for all participants. Views of the landscape from the street (personal pride, other's enjoyment of the yard) and from inside the house (where outdoor living is possibly limited by climate, pest problems or resident immobility) were sometimes most strongly tied to enhanced QOL. Once again, incorporation of sound design principles and objectives (incorporation of plants to attract window-viewing of wildlife or sensitive incorporation of a homeowner's personality in their front-yard landscape, for example) can greatly enhance the design benefits which were voiced as important to QOL.

An appropriate match of homeowner resources to and interest in landscape maintenance was an important recurring topic in that proper levels and efficiency of maintenance were strongly connected to a perception of enhanced QOL. It was

also generally acknowledged that quality design considers the identification and establishment of anticipated maintenance requirements as a key component of the design process. This issue ultimately relates to the need for better client/designer communications and awareness of client lifestyle as previously discussed.

In summary, homeowners were generally satisfied with the landscape design services offered in the Lincoln/Omaha region. Improved communication is needed from both the designer as well as homeowner viewpoint, however, if customer satisfaction and design quality are to increase. There do appear to be strong connections between effective landscape design and QOL, and although yard and garden QOL is not totally dependent on sound design implementation, the collective increase in perceived QOL through good design can be substantial. Clientele education is most needed relative to understanding and appreciating the design process (i.e., what questions to ask, and the role of the homeowner in doing their 'homework') plus the ultimate value of design and the required expertise to successfully achieve it. Designers need to ask clientele more pertinent questions associated with living styles, family needs and site conditions in order to provide designs with better 'fit.' Finally, landscaping is important to homeowners for a multitude of reasons and it can reflect them and energize them in very personal and important ways. As the green industry strives to meet the expanding demand for landscape design services, quality customer service, effective use of the design process (and the time necessary for its implementation), and sound communication skills will all be critical to enhancing both industry profitability and resident QOL.

Literature Cited

1. Anderson, L. and H. Cordell. 1988. Influence of trees on residential property values in Athens, Georgia (U.S.A.): A survey based on actual sale prices. Landscape Urban Plann. 15:153–164.

2. Baldassare, M. and G. Wilson. 1995. More trouble in paradise: Urbanization and the decline in surburban quality-of-life ratings. Urban Affairs Review 30:690–708.

3. Booth, N. 1990. Basic Elements of Landscape Architectural Design. Waveland Press.

4. Burnell, J.D. and G. Galster. 1992. Quality-of-life measurements and urban size: An empirical note. Urban Studies 29:727–735.

5. Campbell, A., P.E. Converse, and W.L. Rodgers. 1976. The Quality of American Life: Perspectives, Evaluations and Satisfactions. Russell Sage Foundation, New York, NY.

6. Diener, E. 1984. Subjective well-being. Psych. Bull. 95:542–575.

7. Csikszentmihalyi, M. 1991. Flow: The Psychology of Optimal Experience. HarperCollins, New York, NY.

8. Gill, T.M. and A.R. Feinstien. 1994. A critical appraisal of the quality of quality-of-life measurements. J. Amer. Med. Assoc. 272:619–626.

9. Horticultural Research Institute, Inc. 1968. The Psychology of Homeowner Reaction to Landscaping. HRI, Inc., Washington, DC.

10. Kaplan, R. 1973. Some psychological benefits of gardening. Environment and Behavior 5:145–161.

11. Kaplan, R. 1984. The impact of urban nature: a theoretical analysis. Urban Ecol. 8:189–197.

12. Kaplan, R. 1992. The psychological benefits of nearby nature. *In*: The Role of Horticulture in Human Well-being and Social Development: a National Symposium, 19–21 April 1990. Timber Press, Portland, OR.

13. Krueger, R. 1988. Focus Groups: A Practical Guide for Applied Research. Sage Publications, Newbury Park, CA.

14. Kuo, F. and W. Sullivan. 1996. Do trees strengthen urban communities, reduce domestic violence? USDA Forest Service Southern Region, Technology Bulletin No. 4, Forestry Report R8-FR55, Athens.

15. Lewis, C. 1996. Green Nature/Human Nature: The Meaning of Plants in Our Lives. University of Illinois Press, Urbana, IL.

16. Marans, R.W. 1976. Perceived quality of residential environments: some methodological issues. *In*: Craik, K. and E. Zube (eds.), Perceiving Environmental Quality: Research and Applicaitons, Plenum, New York, 123–147.

17. Maslow, A.H. 1987. Motivation and Personality, Third Edition. Harper and Row Publishers, New York, NY.

18. Myers, D. 1988. Building knowledge about quality-of-life for urban planning. J. Am. Plann. Assoc., 54:347–358.

19. Morris, M.D. 1978. A physical quality-of-life index. Urban Ecol. 3:225–240.

20. Nasar, J.L. 1983. Adult viewer's preferences in residential scenes; a study of the relationship of environmental attributes to preference. Environ. Behav. 15:589–614.

21. National Landscape Association. 1978. The Art of Selling: A Handbook for Designer-Salesmen.

22. National Gardening Association. 1997. Annual Gallup Organization Survey of American Gardening Demographics.

23. Rodie, S. 1985. Visual quality considerations in the Flint Hills: Assessing the effects of cultural modifications. Unpublished Master's Thesis. Kansas State University.

24. Sheets, V.L. and C.D. Manzer. 1991. Affect, cognition and urban vegetation: some effects of adding trees along city streets. Envir. Behav. 23:285–304.

25. Sirgy, J. 1986. A quality-of-life theory derived from Maslow's development perspective. Amer. Journal Econ. Soc. 45:329–342.

26. Smardon, R.C. 1988. Perception and aesthetics of the urban environment: review of the role of vegetation. Landscape Urban Plann. 15:85–106.

27. Ulrich, R. 1979. Visual landscapes and psychological well-being. Landscape Research 4:17–23.

28. Veenhoven, R. 1996. Happy life expectancy: a comprehensive measure of quality-of-life in nations. International conference on quality-of-life at University of Northern British Columbia, Prince George, Canada. (paper presentation).

29. Waliczek, T., R. Mattson, and J. Zajicek. 1996. Benefits of community gardening on quality-of-life issues. J. Environ. Hort. 14:204–209.

30. Weidemann, S. and J. Anderson. 1985. A conceptual framework for residential satisfaction. *In*: Altman, I. And C. Werner (eds.), Human Behavior and the Environment, Vol. 8—Home Environments, Plenum, New York, 153–182.