INTERNET USER SEGMENTATION USING
VOLUNTEER MOTIVE AS PROXY

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EXECUTIVE SUMMARY

Classic segmentation methods based upon demographic and behavioral models are not sufficient to characterize the rapidly changing technological and social aspects of internet user populations. For the purposes of this paper, volunteering and volunteerism have been selected as proxy for the development of segmentation of internet-using populations.

The motivation-based model developed here is based upon the concept that individual needs flow from beliefs and values, and that needs express themselves as motivation, not only for consumer behavior, but all behavior. While beliefs and values change slowly, behaviors are more dynamic and subject to greater circumstantial influence. Motivations on the other hand, while subject to evolving change, are a more stable basis for segmentation. The resulting model of individual motivations is placed in a relational context of locality, community, and culture.

The segmentation model created is a construct based on existing demographic and behavioral models, but which integrates motivations through the use of sociological models of community relations and physiological theory of individual needs. Also included is an acknowledgement of the social or lifestyle trends including those of technology adoption, civic involvement, discretionary time use, social & relational behavior, and activity preference.

Understanding motive allows superior product or service development and better matching of the needs and desires of internet users, when compared to classic segmentation methods. Finally, derived from this model is a template of criteria for selection of an initial market and for development of user experience within virtual communities of collaboration.

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INTRODUCTION

Market segmentation reflects a product or service provider's efforts focus on the needs of a specific group of customers for which they can create a competing solution with limited resources. By identifying commonality of need among members of a heterogeneous population, a provider or developer of a product can maximized their opportunity to meet needs of the customer more effectively than other solutions.

The market segmentation model within this paper is developed to define groups of internet users most likely to be attracted to virtual communities for the purpose of collaborative decision making.

The method employed is a take-down method beginning with all internet users followed by subdivision of the population using a hybrid segmentation model based on psychological theory, lifestyle, values, behavioral factors, and motivations.

The particular model and segment characteristics set forth will then be used for selecting a beachhead market segment and subsequent adjacent segments for the initial market entry of a web presence offering participation in virtual collaborative communities.

BACKGROUND & METHODOLOGY

Very little substantive public academic or practical literature beyond anecdote is available for effective segmentation of internet users in collaborative productive activities. What is available tends to be specific to a particular product or service, or to the capability of a particular technology, and not a generalized model easily applied to virtual collaborative communities.

Volunteerism draws upon all age, ethnic, social and economic levels of population. The efforts of volunteers support a board array of causes and issues, problems and opportunities, and issue as diverse as the individuals who volunteer. Because of the behavioral similarity between volunteers and internet

users and the extensive literature available, the author chose volunteerism and volunteering as a proxy for internet users.

The methodology employed was an extensive review of the available literature on volunteerism and volunteering in the United States from academic and practicum sources followed by an analysis of behavioral and motivational factors.

SEGMENTATION

Classic segmentation methods provide a specific set of criteria by which to specify particular product features intended to fulfill the targeted consumer's needs. To be a viable, a segment needs to be identifiable, reachable, measurable and large enough to be economically viable. Identification is most often made by direct observation, thus most segmentation methods are based on observable or measurable attributes such as socio-demographic characteristics (age, sex, and social class), life stage (SINKS, DINKS, families, empty nesters) geo-demographic classification, or behavior.

INSUFFICIENCY OF DEMOGRAPHIC AND BEHAVIORAL MODELS

Socio-demographics, life stage, geo-demographic, and behavior are not sufficient for the objectives of this paper because they provide little insight into the causes of behavior. These methods are susceptible to stereotypes, can change frequently, and don't account for individual preference or instability of these factors.   Because of these deficiencies, the adopted methodology was based on expressed motive of volunteers as well as inferred motive from volunteer behavior.

MOTIVE-BASED SEGMENTATION

Use of expressed and inferred motives allows a segmentation of needs and desires which comprise motive. This motivational model allows a more productive segmentation of internet users by characterizing motives beneath observable behaviors, inferred needs or desires underlying those motives. A better understanding of motives allows superior product or service development, better match to the needs and desires of internet users when compared to classic segmentation methods, and flexibility in rapidly changing markets.

HIERARCHICAL MODELS

Analysis of motivations and inferred needs developed from existing literature provided the basis for development of models of: 1) relational behavior and 2) stages of the volunteer life cycle process. In abstracting beyond an observable basis for segmentation, the model looses it's "reachability", one of the criteria for a usable segment. To regain the ability to reach the segments defined, the classifications of volunteer motive were combined with demographic and behavioral data of internet users and psychological theory of needs, to create a set of associations between motive archetypes and behaviors for those internet users most likely to participate in web based virtual communities of collaboration. What has been created in the following pages is a motive-based model providing an overarching cohesive structure believed to effectively join together these disparate models to provide a broader and more predictive method for market segmentation of internet users in the United States.

VOLUNTEERISM

Throughout available literature common themes of expressed reasoning for volunteering have been documented and studied, and a number of behavior models of differeing specificity have been used to explain volunteer behavior.

The following describes the demographic and other characteristics of both volunteers and internet users, and highlights their commonality sufficiently to justify the author's belief that many of the findings related to volunteer motivation may be used to model the motivations of internet users.

PREDICTORS OF VOLUNTEERISM

Research on volunteers and volunteering consistently reports several recurring characterizations. Education, age and income are highly correlated to volunteerism and civil engagement, and these same factors feature prominently in research related to broadband internet use in the United States.

Education

Of those who have attained higher levels of education, more volunteer than those who have less education.

(U.S. Bureau of Labor Statistics, 2011)
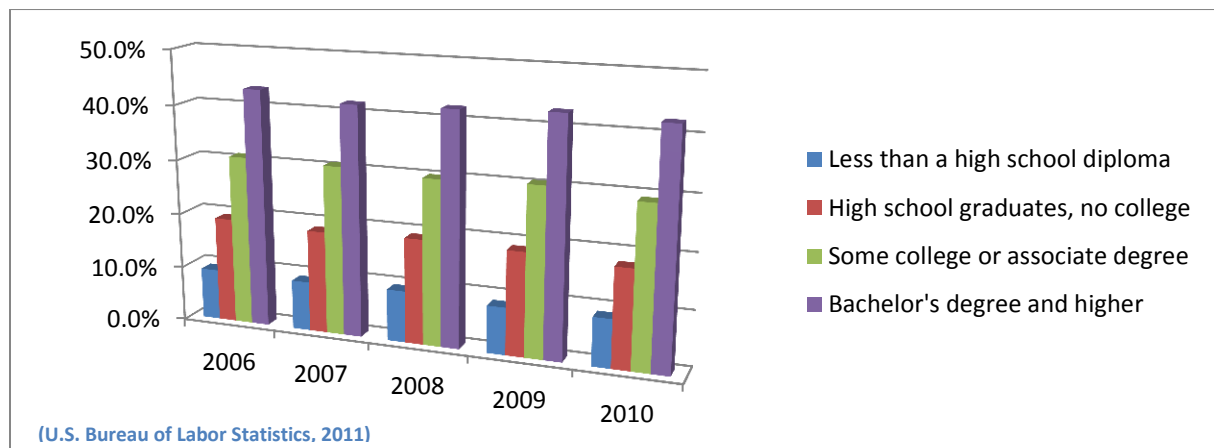
Figure 1 Rate of volunteerism by education achieved

Propensity to volunteer associated with achievement

Researchers differ on why those with more education are more likely to volunteer or be actively involved in community affairs, and whether or not education is an enabler of volunteerism. While beyond the scope of this paper, data does provide a suggestion as to the influence education has on volunteering.

Table 1 Volunteer persistence by education attained

Average time volunteering per week	
Less than High School	1 hr 32 min
High School Graduate	4 hrs 19 min
Some College	3 hrs 8 min
College Degree	4 hrs 58 min
(Hager, 2010)	

Research by Arizona State University (Table 1) found that those who have graduated (high school or college) spend the most time volunteering per week. This suggests that a propensity to volunteer is, in part, related to the

achievement and social capital associated with graduation, successfully applying oneself toward a goal, or even just having time available after academic commitments are fulfilled. Whatever the causality may be, the correlation is sufficient to use educational achievement as an indicator of predisposition to volunteer.

Education as an indicator for broadband internet use

Exemplifying the commonality between volunteer activity and internet use, educational level achieved is also a strong indicator for broadband internet use at home.

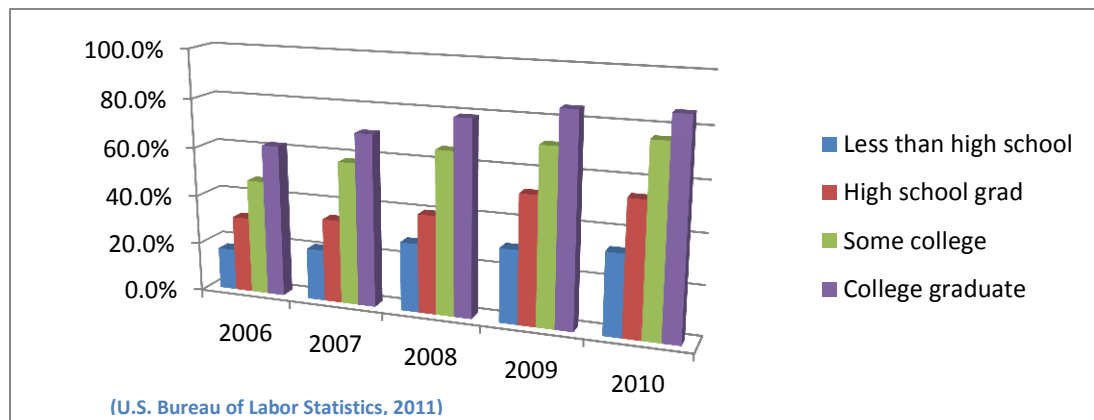(U.S. Bureau of Labor Statistics, 2011)

Figure 2 Broad band use by education achieved

Education imparts prerequisites for volunteering

Understanding Participation - A Literature Review (Ellie Brodie, 2009) discusses one rational for the correlation of education and political participation which is also applicable to volunteering. Their comment is how "education builds self-confidence, increases political knowledge and provides literary skills, all of which are necessary for significant political participation". When compared to citizens with less education, those who have applied themselves and accomplished success in educational are more likely to have become more skilled at the judicious use of time and other resources.

Experience improves social skills

Those who experience academic success are better equipped to function with others in groups in pursuit of shared goals, and thus are more skilled in establishing, maintaining and harvesting benefit from social relationships.

These social successes, the confidence and skills they engender, increase social status and further promote social relationships that afford a college graduate compounding influence and opportunities. In essence, years of education are proxies for social status which also provides more choice and opportunity. "The strongest evidence for this hypothesis is the fact that most educated people are always the most civically engaged and mean levels of education have substantially increased since 1900, yet levels of participation are flat." (Battistoni, 2006)

Discretionary time

 While available time is often used as a rational or excuse for not volunteering which masks other reasons, time is also a real barrier to volunteering. Data shows that those employed part time volunteer more often than either unemployed or full time employed. (Bureau of Labor Statistics, 2007) This

suggests that an individual employed part time feels that their immediate lifestyle needs (food, shelter) of are reasonable assured compared to those unemployed. Counter intuitively, those with high income who are likely to have less discretionary time than other groups but consistently volunteer at higher rates, but for shorter duration. It seems prudent to assume that these classes of individuals are not equally productive in the time they spend volunteering.

Age

Adults between 35 to 54 years of age consistently volunteered at higher rates than other age groups. From 2006 to 2010 the percentage of the US adult population (over 16 years) volunteering more than 100 hrs per year has averaged 26.5%. (U.S. Bureau of Labor Statistics, 2011)

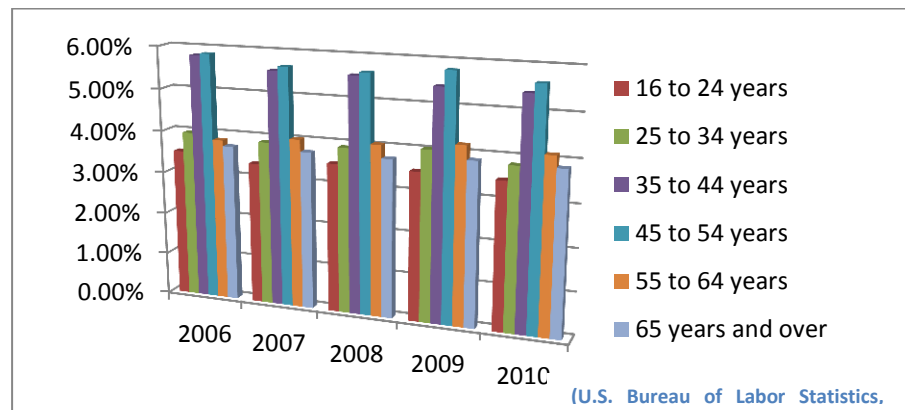(U.S. Bureau of Labor Statistics,

Figure 3 Volunteerism by age group

Adults 18 to 29 years old lead broadband internet usage at home, followed by 30 to 49 year olds. Adults 50 years and older lagged these two groups in their use of broadband internet, however the gap continues to narrow over time. (Smith, 2010)

(Smith, 2010)
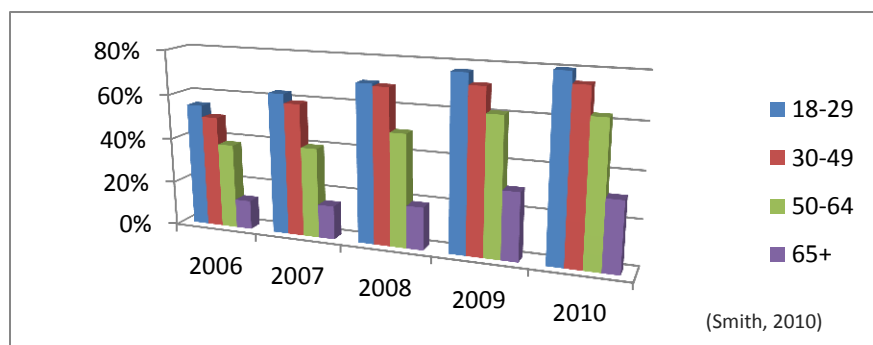
Figure 4 Broadband use by age group

Income

People with higher income volunteer more than those who have lower income. (Ellie Brodie, 2009) Higher incomes correlate to career success, cognitive abilities and social skills. Counter-intuitively, academic and career success is often associated with less time available for non-income producing activities such as volunteering. This implies that high income is correlated but not causal to a propensity to volunteer, and that some attribute of those having higher income (skill, experience, motivations) is of some intangible advantage which expresses as an increased willingness to volunteer.

Like volunteering, higher income is associated with greater internet use in the home. In addition to a greater ability to afford adoption of emerging technology (broadband internet) earlier in a maturing pricing structure, one explanation is that career success and education impart a greater confidence (open mindedness) to try new tools and explore new methods which is then an example for younger household members. Since the home setting is a reflection of familial influence, an additional factor is that higher household income increases propensity to volunteer in younger members of a household.

Figure 5 Volunteerism by income (David Reingold, 2006)
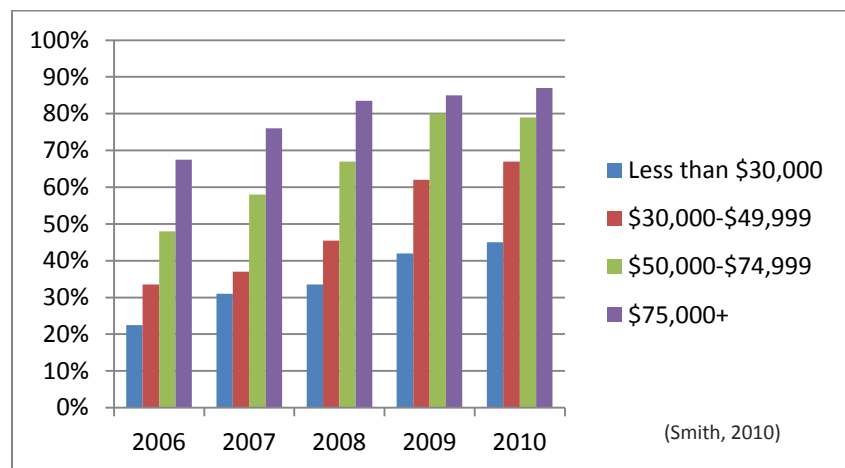
Figure 6 Broadband at home by income

(Smith, 2010)

Social networks

As suggested, more educated people tend to have more extensive and heterogeneous social networks which increase access to career and volunteer opportunities (Ellie Brodie, 2009). Social linkages appears to be the medium through which the advantages of education and social position are joined with a predisposition to volunteer to provide more opportunity for volunteerism, employment, further education, and even wider access to social networks.

As supportive evidence in the negative, a gap in education can deter participants in other ways. For example, a lack of awareness and understanding of governance and political processes can prevent people from getting involved. (Ellie Brodie, 2009)

The patterns and preferences of volunteers vary widely depending on a number of factors. One study, created the six profiles shown in Figure 7 based on a survey of volunteers. (Volunteer20, CONTACT, 2006)   While the terminology of the six profiles are of the surveyors choosing and their use in creating generalizations about volunteers can be limited, they do provide insight into motive and reveal a division between two mechanisms of fulfillment.
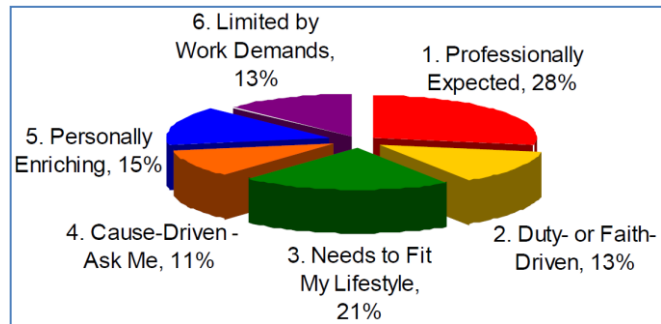
Figure 7 Why People Volunteer   (Volunteer20, CONTACT, 2006)

Fulfillment mechanisms

The six profiles in Figure 7 can be grouped by fulfillment mechanisms as follows:

External-probabilistic

External-probabilistic profiles are those motivated or compelled by external factors which exert influence over the realization of benefits or fulfillment of needs. In Figure 7, Professionally Expected, Duty or Faith, and Limited by Work Demands, are all reasons for volunteering in which an external entity influences the probability of receiving benefits from action taken.

Intimate-causal

In contrast, profiles titled Needs to Fit My Lifestyle, Cause-Driven Ask me, and Personally Enriching are reasons for volunteering in which fulfillment of needs is a direct result of individual action, and the probabilities of receiving benefits are greater.

In practice both mechanisms apply. The expectation of benefits or fulfillment of needs is an interplay of probabilities in which, both conscious and unconscious (rational, emotional) decisions occurs.   This interplay takes place concurrently for a numbers of belief / value based rationales in a given decision by a single individual. To the extent possible, understanding the primary fulfillment mechanism affecting a specific choice provides insight to motivations which can be used in market segmentation.

Provided in the same study, the bar charts in Figure 8 represent the percentage of respondents who said they were very likely to volunteer for the type of organization or activity named. The black bar (leftmost) represents the average interest level for all respondents for a particular activity.
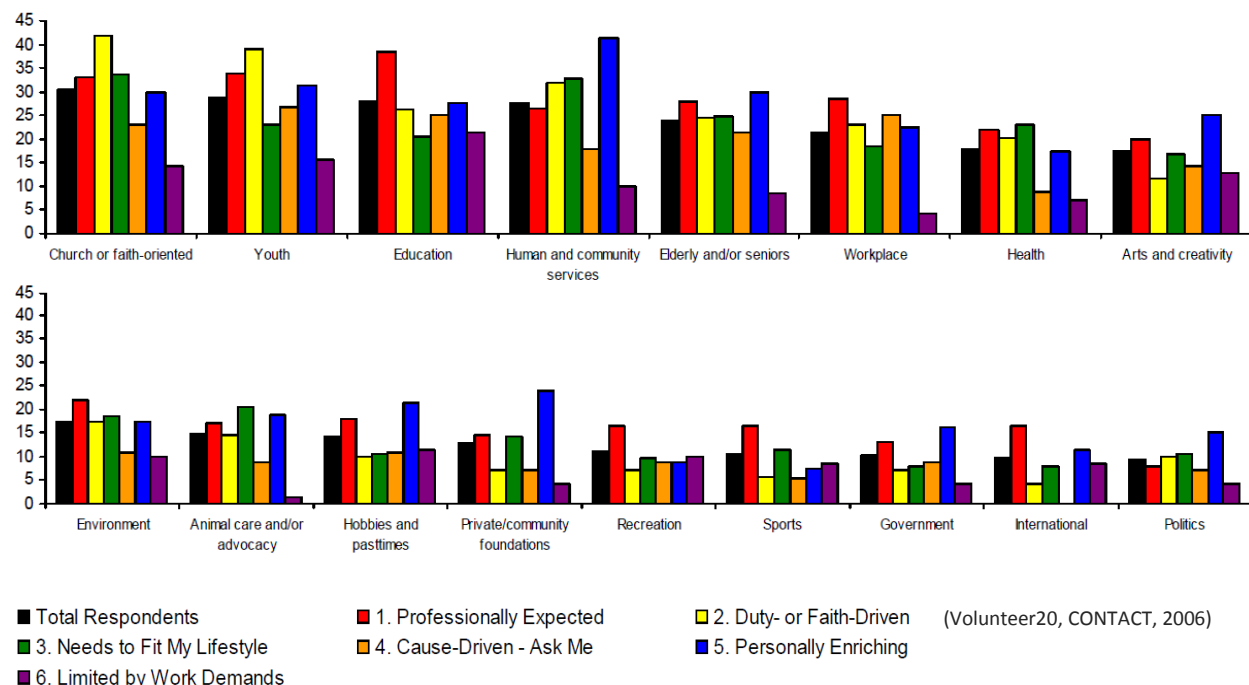
Figure 8 Volunteer interest

Activity preference

Tabulating the average interest level of all respondents, shown as the black bar of Figure 8, the preference for the activities are shown in Table 2. When ranked, these preferences, display distinct volunteer preference for those activities which are the closest, both figuratively and literally. The activities most likely to be undertaken are those associated with those people and communities closest to the individual, and those of decreasing in likelihood of involvement correlate to greater social distances away from self, family and friends.

Table 2 Averages of volunteer activities reported as most likely to be undertaken

41%	Activities that involve my children	25%	Providing companionship
35%	Activities that need my personal traits	22%	Direct service
32%	Activities that need my work skills	20%	Advice or council
27%	Proved others emotional support	19%	Organizing
26%	Leadership	16%	Fund raising

(Volunteer20, CONTACT, 2006)

Trends in Volunteering

Trends in volunteer demographics are valuable in indentifying the changing character of different groups in a population, and for modeling market segments, guiding product definitions, and creating promotional messaging strategies to targeted markets. The following are significant trends identified in recent research:

Reduced civic and professional volunteering
Civic and professional volunteering tends to be regular, repeating and takes place through volunteer organizations. (Grimms, 2005) However, the proportion of volunteers serving through civic, political, professional, and international organizations dropped substantially between 1989 (13.2%) and 2006 (6.8%).

> *(Episodic , regular, and organized volunteering are distinctions made in the primary research between those who spend less than 99 hours per year volunteering (episodic), and those who spend greater than 100 hours per year (regular or organized). While these distinctions are less than ideal (i.e. ad hoc or irregular volunteering greater than 100 hours a year), they do allow comparison of metrics.*

Increased teenage volunteering
Volunteering among teenagers (ages 16 to 19) dramatically increased, more than doubling between 1989 and 2006 from 13.4% to 28.4%. While this teenage rate has increased significantly over the last 30 years, teenagers continue to be interested in episodic volunteering for the most part, and in 2006, 67.9% of teenagers were episodic volunteers. (Grimms, 2005)

Improved volunteer stereotype
In the past, the stereotype of a volunteer was a deterrent to recruiting volunteers. The fact that the rate of volunteering among young people doubled between 1989 and 2006 suggests a major shift in the perception of volunteering.

Baby Boomers - the highest volunteer rate in 30 years
Baby Boomers were responsible for the highest mid-life (ages 45 to 64) volunteer rate in 30 years. Mid-life adults, primarily Baby Boomers, have increased their involvement in volunteering over previous generations. The reasons for this change are complex and varied, but two possibilities stand out: "adults 45 to 64 years old are much more likely to be college educated in 2005 than they were in previous generations; and adults 45 to 64 years old are more likely to have children under age 18 in the home today.(2005)" (David Reingold, 2006)

Older adult volunteering increasing
Older adult volunteering has been on an upward trajectory through the last three decades, going from 14.3 % in 1974 to 23.5 % in 2005. The proportion of older adults who volunteer 100 or more hours a year (organized or regular) increased by 46% in 2005 when compared to 1974, and in 2005 46.1% of older adults volunteer 100 or more hours a year up from 31.6 % in 1974. (David Reingold, 2006)

Greater episodic, less regular organized volunteering
The nature of volunteering changed character between 1989 and 2005. In 1989, 40.1 % of volunteers served 100 or more hours a year, a 30-year high compared to 34.9 % in 2005. The reduction of regular volunteering and increase in episodic volunteering since has been largely driven by teenagers. 67.9% of teens were episodic volunteers in 2005, while 57.7% of adults ages 45 to 64 were episodic volunteers in that same year. These two groups together represent the largest increase in the sheer number of

volunteers, and they have shifted the overall character of volunteering in the United States towards episodic volunteering. (David Reingold, 2006)

Episodic volunteering provides greater and more varied opportunities for individuals not otherwise able to make an extended commitment or regular contributions of time, but still wish to volunteer. This is consistent with observable lifestyle and "work style" changes many have associated with the adoption of technology, a more rapid pace of everyday life, and information overload.

VOLUNTEERS AS PROXY FOR INTERNET USERS

At a fundamental level, volunteerism competes with on-line and other activities for an individual's discretionary time. As shown above, volunteerism and internet use share a number of common themes. The amount of literature available on volunteerism provides a significant source of data to support analysis, making it well suited as a proxy for internet user segmentation.

Of the many options an individual has for the use of discretionary time, every choice is influenced by a number of factors. Whatever the choice of a specific individual, it must be assumed that by nature of being selected, that choice provides the greatest fulfillment of benefit at the lowest use of resources or time for that individual.

An individual's motivations for volunteering or using the internet are the product of a set needs and desires which stem from core beliefs and values. From this basis, the motivational models of participatory volunteerism can be applied to online communities, and specifically to potential participants in collaborative communities.

VOLUNTEER MOTIVE MODELS

> **Observations > Beliefs > Values > Needs > Motivations > Behaviors**

VALUES AND BELIEF

Internet users as a whole are the subject of a number of demographic and behavioral segmentation models created from different supply-side perspectives (product or service). These tend for be specific to a particular type of business model, or biased towards a particular technology of fulfillment. The motivation-based model developed here is based upon the concept that basic individual needs flow from beliefs and values, and that needs form the basis of individual motivational not only for consumer behavior, but all behavior.

Looking at the causal chain from motivations to needs above, one sees that beliefs and values are the basis for an individual's needs and desires. These in turn are expressed as motivations leading to behavior. While beliefs and values do not change (or change very slowly) through an individual's adult life, needs, motivations and behaviors are increasingly dynamic in comparison, and subject to greater circumstantial and environmental influences. This changing character of observed behavior is the limitation of behavioral segmentation models. Motivational and needs based segmentation, as explored in the paper, are less dynamic and can provide more stable basis for market segmentation.

Motives are influenced by personal experience and social context rather than situational context. However, while more stable, motives are not directly observable and must be inferred from behavior, or if expressed require interpretation.

RELATIONAL MODEL

The analysis of research on volunteer motivations provided a substantial amount of data ranging from very general to quite specific. These data were categorized using the constructs of leading theory-of-need models to correlate as many motivations as possible with particular aspects of existing psychological and sociological theory. This includes creating generalizing representations of similar groups of motivational terms.

Figure 9 Relational spheres model
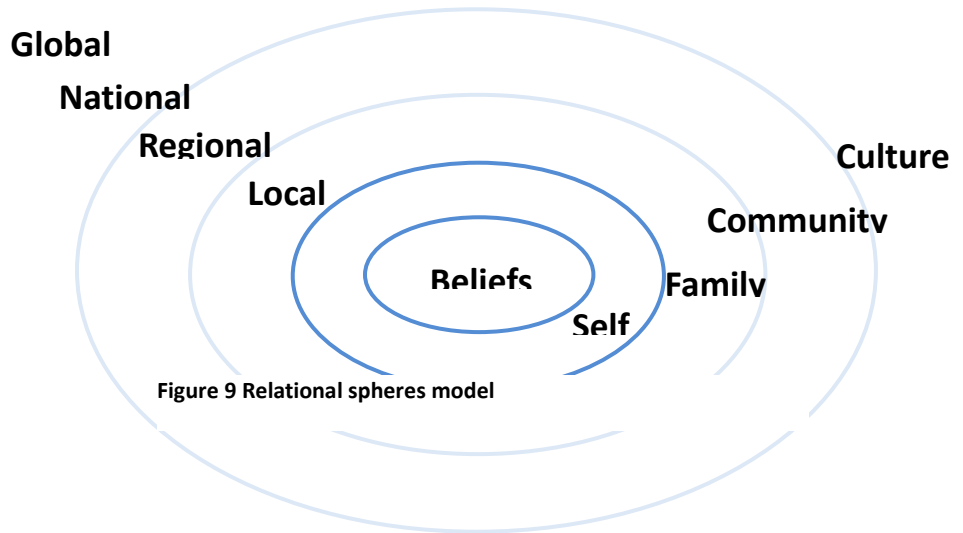
Not unexpectedly, the result was a set of terms or descriptions of motivational factors which naturally grouped based on the types of relationships the volunteering individual took part in, as well as their relative social maturity. Relationships and the level of social maturity are the basis for the model of concentric relational spheres (Figure 9), the model of volunteer life cycle (figure 10), and the structure of needs based motivations built upon these two.

Volunteers as a class are a group of individuals who each possess a unique mix of experience, rational ability, beliefs and values which have been developed over a lifetime. Far from forming in isolation, these individualities develop in a social and spatial context of past and present. This represents incredible diversity within a population, but it is a relatively stable diversity which imparts stability to collective set of motivations.

As an example of how the individual relational functions are modeled; an infant's relational spheres quickly expand beyond self after birth to include parents and family members. An adolescent's spheres include friends, teachers, school mates, community and wider social circles connected with family. Young adults further expand their spheres as they explore geographic region, social circles and roles disassociated with family.

As social awareness expands through these concentric spheres, each individual defines and redefines her or himself in evolving concepts of self, learning, and questioning, testing different beliefs and values and how she or he relates to and interacts with others.
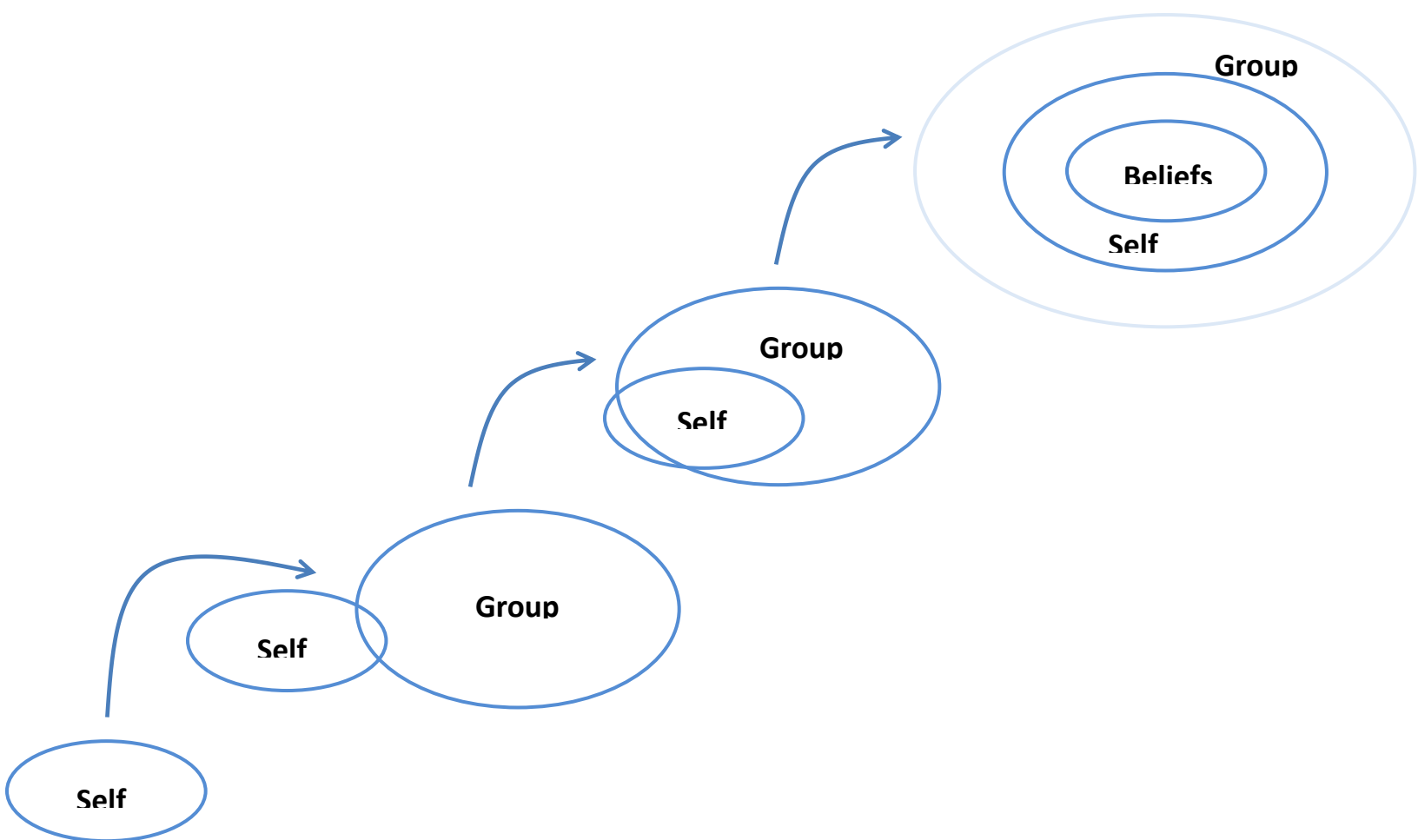
Figure 10, entitled Potential states of relational existence, reflects stages of relating as spheres. Rather than a linear progression, it is best interpreted as a set of potential states into which an individual grows intellectually and emotionally over time.

An individual functions within a growing set of relational spheres beginning with the lower and progressing to a point in which they function throughout and between as many spherical domains as possible depending on the individual's emotional, social, and intellectual abilities. They will function simultaneously in several states depending on the number and type of issues an individual is dealing with at a given time.

Figure 10 Potential states of relational existence

Expressed volunteer motivations

Beginning in relatively simple terms, an elementary set of motivations for volunteer activities was expressed in a study entitled: Why People Volunteer (Volunteer20, CONTACT, 2006). They are:

1. ~100% - Helping family and friends.
2. Followed by activities needing personal talents
3. 90% - To 'leave a mark' or 'make a difference'

4. Followed by Personally Enriching (fun, enjoyable, a new learning experience, doing something important)

Even at this relativity course level of abstraction, the structure of relational spheres emerges. Virtually all of those surveyed placed helping family and friends above all other motivations for volunteering. The second highest rank was given to activities needing personal talents. This suggests that a weighing of the observed need and the individual's ability and the likelihood of success is an important part of volunteering.

The third and fourth ranked motivations differ from the first two in that they represent a class for which benefits are non specific, are general in nature, and for which probability of an external benefit seems to be a minor concern. In contrast, the first two motivations listed fall into a class in which the probability of receiving some specific benefit is weighted more highly. Together these suggest a decision method that includes many factors, including social, spatial, and intellectual interest.

Scope of charitable giving

Charitable giving is one way individuals with little time to offer can act in concert with their beliefs. As further corroboration of the concept of relational spheres, table 3 below reflects the same preference for local causes reflected in the relational spheres, with the greatest giving in support of activities associated with the inner spheres, those which are most intimate to self, family and community.

Table 3 Charitable giving

64.1%	Local nonprofit
12.1%	Statewide nonprofit
12.8%	National nonprofit
11.0%	International nonprofit

(Hager, 2010)

VOLUNTEER LIFE CYCLE

The process through which volunteers become active, stay involved, and cease volunteering is insightful because it can expose underlying motivations. According to a report from the Voluntary Action Directorate Multiculturalism and Citizenship Canada entitled; Why People Volunteer, of those who volunteer, 40% were asked or invited, 25% became aware of the opportunity to volunteer through networking (family and friends), and 20% sought out the opportunity to volunteer on their own initiative. (Ancans, 1992) Individuals commonly start in one of these ways and begin a process of volunteering represented by the volunteer life cycle shown in Appendix

Preconditions

Propensity

Assessment trigger

Active consideration

Volunteer commitment

Mobilized participation
(or early departure causes)

Persistently active

Departure
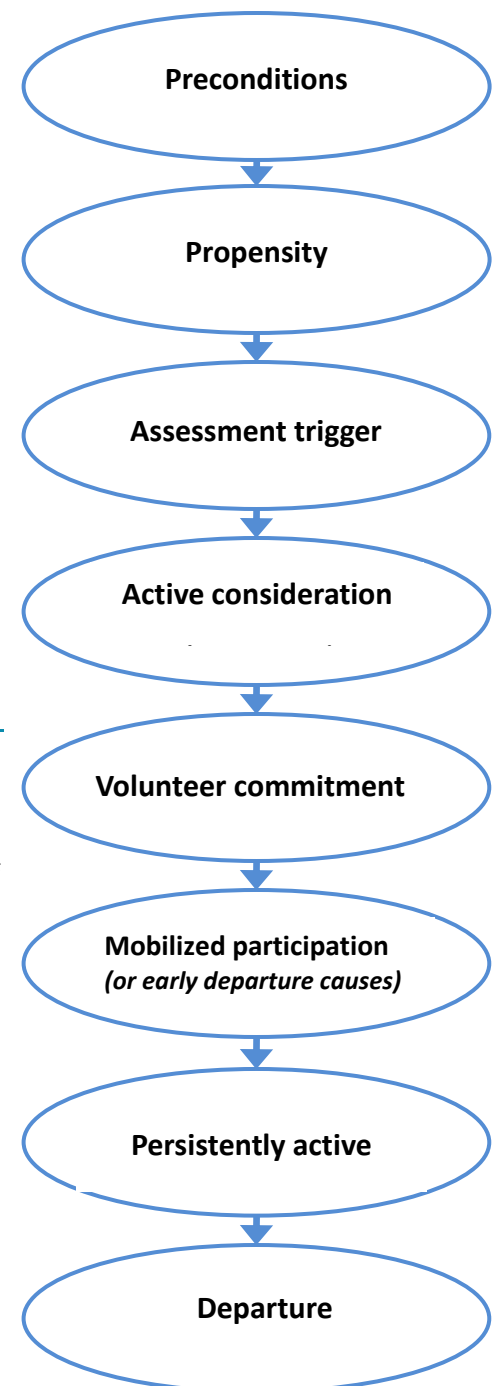
B. This lifecycle model details the process steps and the factors influencing volunteering.

The volunteer lifecycle model provides a temporal context for choice and motive for each stage, and represents the factors which influence the relationship between the volunteer and the locus of the opportunity (the organization, community, etc).

Influence of family, friends and community

Society (family, friends and community) and culture have significant impact on individual predisposition to volunteering. Access to volunteer opportunities is provided by, or accomplished through, community networks. Society and social networks functions in a match-making role, telegraphing opportunities towards groups of individuals who are likely to have interests and necessary skills, as well as propagating information about skills and interests of individuals through the social network. The most effective attractants to volunteering are those issues which are of enduring consequence to the potential volunteer in the innermost relational spheres.

Figure 11 Volunteer lifecycle

Volunteering trigger

A close match of a particular volunteer opportunity and a specific individual can create a trigger event. That trigger can be initiated by a member of the community as an invitation to volunteer, an introduction or referral, or can be initiated by the individual themselves. The trigger is followed by an active consideration by the individual and the object of the volunteer opportunity (group, organization, etc.) in which each takes measure of the other and decide to engage or not. Once intent has been established an exchange of commitments and mobilization follow.

Concluding volunteer engagement

The last two steps of the lifecycle model are persistent and departure. Volunteer engagement can last for years or an afternoon. Persistence in volunteering encompasses the time over which a volunteer is active, the frequency at which they volunteer, and how much time they spend each time they volunteer.

Ultimately however, all volunteer engagements conclude. There are a wide variety of reasons for concluding a volunteer engagement, some of which are controllable, and can be avoided by the organization facilitating the volunteer engagement. These controllable factors provide the opportunity to sustain and extend persistency if adequately considered in planning and administering volunteer programs.

SEGMENTATION OF INTERNET USERS

As shown, volunteerism in the United States exhibits trends which track well with those of internet users. Thus far volunteering and the factors effecting participation have been modeled as demographically, and in a relational context which changes over time. These models provide the basis for applying motivation-based models of volunteers to internet users.

The focus now shifts to defining a template for practical segmentation of the internet user population of in the United States for the purpose of targeting a beachhead market and attracting participants to on-line virtual collaborative communities.

MOTIVATION-BASED SEGMENTATION

The needs based motivational model which follows is built upon the concepts of relational spheres, volunteer lifecycle, as well as trends and demographic predictors of volunteering. Appendix A, entitled Needs Based Motivational Model, is a categorization of generalized motivational archetypes. This depiction of motivations is the basis for a template of segmentation criteria by which to assess various populations for suitability as a beachhead market. Once a target market is selected, this same model can be useful in the development products, services, and the design of user experiences for those participating in virtual communities of collaboration.

DEMOGRAPHICS

The commonalities between volunteer and internet user demographics has been discussed, and for the purpose of this paper are used to reduce the scope of population segmented to something less than all internet user in the United States. The initial segmentation of internet users' targeted is made by the now familiar demographic factors of education, age and income criteria.

Education

The targeted internet population will include individuals who are not currently students, who possess doctoral, masters and other graduate degrees, followed in priority by those with BS, BA or four year undergraduate degrees, and lastly by high school graduates.

Age

The most prodigious volunteers are adults between 35 to 44 years of age, followed by 45 to 54 year olds. Weighting these groups by population provides a normalized comparison reflecting each group's contribution to total available market estimates. Table 4 indicates targeting of individuals 45 to 54 years old, followed by 35 to 44 year olds, and then those 25 to 34 years old.

Table 4 Weighted Age Segment Targets

Age	2010 Population (K)	% Total of US Population	Volunteer Population (%)	Broadband use (%)	Normalized Weighting
25 to 34 years	41,818	17.52%	3.83%	77.50%	1,241
35 to 44 years	41,277	17.29%	5.40%	75.00%	1,673
45 to 54 years	44,705	18.72%	5.63%	69.00%	1,736
55 to 64 years	36,275	15.19%	4.12%	63.00%	941

(Bureau, U.S. Census, 2011), (Smith, 2010)

Income

While income is not an exclusionary criterion, messaging and marketing strategies can be differentiated by income level. Thus, those earning incomes from $36,000 to $49,999, $50,000 to $74,000, and $75,000 or more per year represent demographic divisions for motivational segment weighting and messaging when applicable.

SOCIAL NETWORK FAMILIARITY

Social network use is a foundational requirement for participation in virtual collaborative communities. For those not familiar with social networking concepts, lack of social networking experience will be barrier to participation, thus initial beachhead market targeting will focus on those who are already familiar with the concepts of social networking.

ACTIVITY PREFERENCE

Most models of volunteerism demonstrate strong preference for activities associated with family and local community. In virtual communities beyond family and friends the significances of literal locality is dramatically reduced and figurative locality becomes dominant. Among individuals participating in a

virtual community, physical locality is of little consequence. The asynchronous nature of interaction which dominates virtual communities also renders temporal locality inconsequential. Figurative locality includes the element of relational spheres of Figure 9 and 10 as described earlier, and encompassing common interests, expertise, practices, problems, vision, philosophy, beliefs, values, desires, skills, etc. Together these elements allow an expanded construct of locality which has already been experienced in the United States and beyond as evidences by greater interest in regional, national, and international issues which were well beyond pre-internet boundaries of local concern. The phrase "Think globally act locally" (advanced by Stuart Grauer, Think Globally, Act Locally: A Delphi Study of Educational Leadership) in increasingly becoming "Think globally act globally". Global is the new local.

INTIMATE CAUSAL FULFILLMENT

When seeking to target population segments most likely to have a positive initial experience in a virtual collaborative community it is prudent to prioritize those of "intimate causal" fulfillment mechanisms in order to reduce the effect of external influence and increase the potential for a positive initial experience. (Intimate causal fulfillment is not dependant of some external entity for satisfaction. For example: a learning activity, creative expression, etc.)

LIFESTYLE TRENDS

The noted decrease in organized, regular volunteering, and growth in episodic volunteering, strongly suggests that lifestyles are increasingly dynamic and that internet users predisposed to virtual collaborations will actively participate if they can fit it in with other lifestyle choices. Compared to traditional volunteering rates influenced by travel and the involvement of physical activity, internet users unburdened by physical constraints or other barriers to participation, are expected to participate at significantly higher rates.

PRIOR CIVIC ACTIVITY

The volunteer life cycle model suggest that initial target segment of internet user should include those who have volunteered, been civically active, or are otherwise predisposed to participation by family or culture.

RELATIONAL BEHAVIORS

The structure of needs-based motivations in Appendix A includes categorization based on the relationships between and individual (self) and non-selves. Table 5 offers a generalization of the archetypes of relational motives from Appendix A which tends to further the practical definitions of how an individual relates to non-selves, as well as generalized behaviors and prevalence. Those described as prevalent, very common, or as dominant, are classifications on which segmentation can be based and specific market strategies will be formed.

Table 5 Generalized relational behaviors

	Relational behaviors are not mutually exclusive in time, within an individual, or between topical domains. Some are requisite for the others, and their expressions may emerge and recede over time.
Selfish	Initial developmental state of self preservation, selfish interests of safety, security. Development of identity, enjoyment and creativity.
External communal	Prevalent – Participates in societal groups for the benefits received for self. Contributes social table stakes, cultivates relationships by functional necessity, complies with behavioral norms, acquires education and skills necessary to function in society and to fulfill selfish individual need. Societal contributions are investments for which specific probable benefits are expected. Selfish needs include choice, freedom, autonomy, change, expression, and avoidance of fear, pain and discomfort.
Internalized communal	Very common - Characterized by placing the needs of the group before selfish needs. Societal contributions are investments for which non-specific benefits are probable, but in sum compelling. Group identity association (Family, ethnic, cultural, national) drives a "sense of duty" or action for "communal good".
Localized interest	Dominant – Having the greatest interest in and commitment to their intimate locality of family, school, gang or other immediate social circumstance which may not be a physical locality, but a locality of common interest or circle of shared professional interest. Manifestation declines as social distance (relational spheres) expands.
Intellectual/personal growth	A sustained interest in and action toward personal betterment of abilities, competence, skills, to change what they "are" and become more of what they "can be".
Truth seeking	Conscious desire and decisive action toward understanding and conscious formation of belief. The abstraction of ideas, generalization of concepts, seeking of knowledge, formation and testing of beliefs, addressing incongruence.
Actualization	Belief based action consistent with values.

ATTRACTING PARTICIPANTS

Several general classes of needs-based motivations are relevant to successful participation in virtual collaborative communities.

- Communal integration – Networking, relationship development, trust
- Practical – Vocational skills, marketable skills
- Freedom – Self determination, to have a say
- Effect – Make a difference, have a purpose,

- Growth – To achieve, creativity, competancy, mastery

These class definitions serve as part of a template for needs assessment of specific accessible market groups and for feature development of a web presence through which virtual collaborative groups can be offered. Attraction includes the removal of barriers-to-entry as well as the setting appropriate, credible, and compelling expectation for fulfillment of needs.

SUSTAINING PARTICIPATION

Once attracted, sustained participation is achieved not only by satisfactorily fulfilling needs, but by doing so more widely and more completely than alternative or customary means. In addition to feature development, need-based motivations which must be considered when developing a broader user experience, look and feel, culture etc., including the following:

- Identity – Self esteeme, feeling productive
- Social relating – Hierarchical position, social comparison, competition
- Situational – Order, predicability, fairness
- Communal benefits – Belonging, acceptance, recognition, interdependance
- Communal contribution – Betterment & empowerment of group
- Belief – Exploration, development, expression, propigation of values.

As segmentation models evolve and specific groups are considered as beachhead market candidates, it is likely that additional classes and refinements will become evident.

TARGET PROFILE CRITERIA

The criteria for consideration of a market segment for selection as the beachhead market are as follows:

CLASS CRITERIA

- Broadband internet user in the United States
- Familiarity with social networking
- 35 to 44 years old, followed by 45 to 54 year olds
- Not currently students, possessing doctoral, masters or other graduate degrees, followed in priority by those with BS, BA or four year undergraduate degrees, and lastly by high school graduates.
- Household incomes: $75,000 or more per year, $50,000 to $74,000 per year, and $36,000 to $49,999 in order of desirability.
- Those who have volunteered, been civically active, or are otherwise predisposed to volunteer participation
- Issues and interests predominantly in the inner relational spheres
- Those functioning primarily in the external communal and internalized communal forms of relational behavior.

INDIVIDUAL MOTIVATION CRITERIA:

Those most amenable to participation in virtual collaborative communities are expected to be attracted by motivations in the following categories:

- Communal integration – Networking, relationship development, trust
- Practical – Vocational skills, marketable skills
- Freedom – Self determination, to have a say
- Effect – Make a difference, have a purpose,
- Growth – To achieve, creativity, competancy, mastery

TARGET MARKET SELECTION

The next step of the process of segmentation, targeting, and product positioning, is the selection of target markets based on the segmetation criteria. While the targeting anaysis is beyond the scope of this document, examples of potential market classes for review include the following:

Civic groups:	Polictical interest:	Action groups:
Teen pregnacy	Tea Party Patriots	Institute for counter terrorism
Big brother,	Pollitical action groups	Environmental groups
Boys to men, etc.	Smaller government	Crowd sourcing groups
	Any street	
Academic groups:	**Non-governmental**	
Think tanks	**organizations:**	
Interdisiplinary studies		

SUMMARY

The dynamic nature of internet technology, social applications, and patterns of social behavior, make development of a stable, if not enduring, model of internet user segmentation difficult.

Volunteerism as a proxy for internet users enables development of a motive-based segmentation model which is more stable than behavioral models, and more insightful than demographic models.

Demographics of internet users and motive-based segmentation models, set within a context of social relationships and psychological needs theory, provides a usable model by which to segment internet users.

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APPENDIX A - NEEDS BASED MOTIVATIONAL MODEL

(About me)		(About others)	(About truth)
Relating to environment	Relating to non-self's	Communal	Relating to truth
Self	**External communal**	**Internalized communal**	**Beliefs**
Physiological needs	**Social table stakes**	Needs of community	Testing of beliefs (inherited, alternate)
Air, water, food, clothing, shelter, procreation	Trust in others	Probability of non-specific benefits	Non-alignment of beliefs and observations
Physical security	Perception/ judgment of others	Public/group/cause values	Denial of inconsistent beliefs
Health, fitness	Standards of behavior, interaction, performance	Betterment of group	Resolution of incongruent beliefs
Psychological needs	Social comparison, Hierarchal positioning	Empowerment of group	Development and trial of value sets
Situation	Organizational formality, style	Betterment of family	Vision, Philosophy, Meaning
Order, predictability	Expectation of professional peers/superiors	Ethic, Cultural, Communal, National identification	Value expression
Familiarity	**Practical needs**	Sense of duty	Help other beyond local & community
Fairness and consistency	Marketable Skills development	Giving back	Seek social change
Insurance, reserve resources	Vocational experience	Community grievance	To improve things
Avoidance of adversity	Career advancement	Social boundary defense	Passion for a cause
Identity	Apply existing skills		Needs of others
Self-esteem, confidence	Weight of personal priorities		Compassion
Self-respect and acceptance	Object utility		Religious beliefs
To feel productive	Relative cost / benefit		Benevolence – Love of others
Effect external	Academic credit		Patriotism – Love of regime
To make a difference	**Social Investment**		Desire for understanding
Create a legacy	Commitment to local community		knowledge, curiosities
To have purpose	Support of community members		Life experiences
Accomplishments	Probabilities of specific benefits		**Actualization**
Aspirations for change	Network, relationship development		Acting upon values
Growth	**Freedom**		Propagation of values
Enjoyment	Choice, Self determination		Vision development
Creativity	Influence on destiny		Knowledge pursuits
Desire for strength	Independence and freedom		Interests exploration
To become more	Flexibility, Autonomy		Adventure, stimulation
Desire for mastery	To have "A Say, A Voice", Empowerment		
Desire for competence	Seeking to affect change		
To achieve individual potential	Avoiding pain, fear, discomfort		
	Social Benefits		

	Belongingness, acceptance, association, social integration		
	Need for respect, recognition, approval, validation		
	Desire to be accepted and valued		
	A sense of contribution, to feel useful		
	Friendship, Camaraderie, common interests		
	Shared experience and activities, need for social interaction		
	Interdependence		
	Trust of others		
	Mutual support, Security		
	Desire for influence		
	Expected future benefits / rewards		
	Reputation, Image		
	Communal knowledge and resource access		
	Observation of consequence		
	Intimacy, Familial relationships		
	Fun, Play		
	Learned behaviors		
	Understanding self through others		
	Addressing of grievance		

APPENDIX B - VOLUNTEER OPPORTUNITY LIFECYCLE

Preconditions	Access to opportunities to volunteer Minimum abilities Unsatisfied individual desires
Propensity	▪ Family, community, or cultural expectations ▪ Observed examples ▪ Learned behavior ▪ Trusted mentor or role-model example ▪ Past rewarding volunteer experience
Assessment trigger	Self initiation or invitation
Active consideration	▪ Perceived potential for desire fulfillment ▪ Potential for additional benefits ▪ Organizational assessment ▪ Alignment of opportunity and interests ▪ Necessary minimum abilities ▪ Expectations established ▪ 3rd party reference

	Organizational inhibitors:
	   – *Undefined recruitment process*
	   – *Too formal or lengthy recruitment process*
	   – *Lack of contact during recruitment process*
	Practical inhibitors:
	   – *Cost*
	   – *Access to volunteer opportunities (poor network)*
	   – *Logistics – (Transportation, meeting time, …)*
	   – *Actual time constraints or other obligations*
	Social/ cultural inhibitors:
	   – *Historical, Cultural, Communal or Familial dissuasion*
	Psychological inhibitors: *– (sometimes expresses as rationalized practical inhibitors)*
	   – *Poor perception of "volunteers", as a class*
	   – *Fear or Anxiety*
	   – *Doubt about self, abilities, knowledge, skills or task*
	   – *Expectation of discrimination*

Volunteer commitment	▪ Organizational orientation

Mobilized participation
(or early departure causes)

- Organizational needs match
- Group integration
- Social bond creation

Task assignment
Collaborative participation
Ongoing satisfaction probability modeling

Individual departure incentives:
- *Insufficient investigation*
- *Poorly understood or changing individual desires*
- *Unrealistic or unmet expectations*
- *Low perceived probability of expected benefits*
- *Mistrust or organization or individuals within*
- *Failure to integrate or form social bonds in group*

Organizational departure incentives:
- *Discontinuity of espoused philosophy and actions*
- *Disorganization*
- *Ineffective or no training*
- *Little or no counseling, guidance or mentoring*
- *Poor leadership support*
- *Inhibiting organizational structure, resources, or ideology*
- *Staff indifference to volunteers*
- *Loss of individual autonomy or flexibility*
- *Wrong assignment*
- *Burn out*
- *Low stimulation (Boredom)*
- *Inappropriate recognition*

Persistently active

- Family/ communal participatory history
- Previous participatory experience
- Well integrated into group
- Valued by organization
- Sufficient benefits received (expected of not)
- Friendships/ networking made through participation
- Stable life style
- Explicit volunteer management methods
- Good organizational support
- Appropriate recognition or appreciation
- Achievement of volunteer objectives
- Growing emotional attachment to cause
- Convergence of beliefs

Departure

- Diverging of individual interests and organizational needs
- Life change - marriage, divorce, birth, death, job, finance, health, relocation
- Epiphanic experience - changing philosophy, vision, religious beliefs