International Journal of Home Economics

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Publication in IJHE gives wide exposure to your work and adds to the professional literature base of our field. Theoretical papers, literature reviews, and a wide range of genres along with research papers, are invited for publication in the journal. As editor, I strongly encourage submissions to the journal.

Since our last issue, the international community of Home Economics professionals have lost two prominent leaders in the field. Our deepest condolences to their families, loved ones and colleagues.

Dr Kulkanit Rashainbunyawat, IFHE Vice-President Asia (2010-2014) passed away on April 28, 2011. As noted on the IFHE website, “[W]e all acknowledge her love and dedication to the IFHE but also her professionalism and knowledge in the field of Home Economics education” (The International Federation of Home Economics website, 2011)

IFHE President of Honour Dr Doris Badir (IFHE President 1988-1992), Canada, passed away on 7th of June 2011. The International Federation of Home Economics website notes that “[W]ith the death of President of Honour Doris Badir, IFHE has lost an extraordinary Home Economist, a leading personality, a strong IFHE President and a wonderful woman and friend.” To read both obituaries prepared by Geraldene B. Hodelin, please visit http://www.ifhe.org/61.html

On a happier note, one of this Journal’s most prolific contributors, Sue McGregor of Mount Saint Vincent University (Halifax, Nova Scotia) was recently awarded the Kappa Omicron Nu Marjorie M. Brown Distinguished Professor Award. Congratulations.

Please do not forget the IFHE XXII World Congress focusing on Global Wellbeing in Melbourne, Australia 16-21 July 2012. For more information, visit http://www.ifhe2012.org/

Donna Pendergast, PhD
Editor, IJHE
Interaction of societal development and communication technology

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Abstract

Societal development has always been influenced by technology, and by information and communication technology (ICT) in particular. Communication technology has an impact on daily life: Consumption patterns and daily activities change, the concept of a household is affected, and the organisation of domestic labour is supported by the technology. Despite a vast number of articles written on this subject area, there is still little research done in the field of Home Economics. This aim of the article is to formulate a preliminary research agenda.

Key words: ICT, consumption, household, societal development

Introduction

On a sunny afternoon I showed around a foreign friend of mine. When we drove along the dyke of the river Rhine, we first saw a long line of parked cars, and then a row of people with cameras, binoculars, and long focus lenses, intensively looking towards the flood plains. When asked what they were doing there on this weekday, they answered in a tone as if this was most obvious: “We spotted a Purple Sandpiper.” Paradoxically, this nature scene, both the bird watchers and me and my friend going on a little tour, would not have been there without the aid of communication technology. The appointment with my friend was made through e-mail, and the bird watchers reacted to an sms warning, or were informed through e-mail or micro blogging.

The scene described is not only an example of paradoxes of modernisation, it is also an example of how communication technology influences everyday life. In this article, existing literature on this impact is explored. The aim is to formulate a preliminary research agenda for home economics.

Methods

This body of this paper consists of an exploratory review of literature. After a general introduction on paradoxes of modernisation and the relationship between technology and social development, the extensive overview of Geser “Towards a sociological theory of the mobile phone” (Geser, 2004) is taken as point of departure. Since Geser’s article stems from 2004, and since the area develops rapidly, additional literature has been accessed through the Scopus database, for the years 2004 up to present. This choice was made since Scopus contains an extensive number of articles, in particular in the social sciences. The following search expression was used: (“communication technology” OR ICT) AND (household* OR domestic OR “private sphere”). The abstracts of these articles have been coded in Atlas.ti.
(version 6), a programme for qualitative data analysis, in order to find patterns in the literature. The paper concludes with a preliminary research agenda.

**Paradoxes of modernisation**

Paradoxes—seemingly contradictory issues—are in fact two sides of the same coin: The increase and decrease of scale in industry, occurring simultaneously, are both the result of developments in organisation, supported by information and communication technology. Globalisation and localisation, mass consumption and individualised consumption patterns, increasing rationality versus growing interest in spirituality, have the same origins (Casimir, 2001). CNN is received in almost every corner of the world, while local newspapers and television stations develop at the same time. The same pop stars are popular in different parts of the world, the same supermarket products can be bought everywhere, exotic food is popular in developed countries. While consuming a limited number of world-wide well-known mass-produced items, an explosion of different consumer goods enters the market. And though consumers are breaking away from the old traditions and try to express their identity with individualised consumption of these consumer goods, they seem to fear deviation from the majority, resulting in a paradoxical situation. The multitude of options leads rather to conformation than to differentiation (Toffler, 1971; Toffler, 1980; Van der Loo & Van Reijen, 1993; Freeman, 1994; De Hart, 1995; Handy, 1995). The website Exactitudes (http://exactitudes.org) is a perfect showcase of this phenomenon: everybody different, everyone the same (Versluis & Uyttenbroek, 1994).

**Technology and social development**

Technology has always been used to overcome the limitations of nature. Men developed farming equipment to increase agricultural production, built dykes to guard us from the water, and invented engines for more efficient production and transportation. This resulted in productivity growth, and consecutively in economic growth. The before-mentioned examples of concentration and decentralisation are supported by technology: the implementation of machines, advanced transportation means, and distributed knowledge and decision power.

One of the consequences of the application of technology in industrial production is the division and subdivision of tasks in component parts (Galbraith, 1967). The concentration of production in factories marked the separation between the work sphere and the private sphere. Industrialisation is not limited to a single society. Production and distribution activities are global rather than national (Giddens, 1997).

Technology is not only an aspect of production techniques; consumer goods are technological artefacts themselves. It is, to a great extent, a matter of “technology push”: Consumers do not ask for new products or new variations of old products; they merely are seduced to buy those products. Or, they are even forced to buy these, when the old alternative does not exist anymore. We could do without a car for ages, but once we discovered places that could not be reached without it, it was difficult to difficult to live without one (Gorz, 1978; Casimir, 1982). In the 1980s a futurologists of the Philips company quoted: “We have a lot of solutions waiting for problems” (Van den Berg & Casimir, 1984).
A “demand pull” does exist, though its possibilities are often exaggerated. When consumers buy products, they implicitly ask for them, thus steering production to a limited degree. In some branches—cars, furniture—products are assembled only after ordering, enabling consumers to choose their own specifications and accessories. Here they seem to have more influence. Sometimes, products are used differently from their original purpose, which appears to be an incentive for new developments. Telephones originally had an instrumental purpose, exchanging messages for business use only. When subscription rates became affordable, private use became possible, and telephones are used for personal communication for its own sake, in particular by women (Haddon & Silverstone, 1994; Silverstone, 1994; Frissen, 1997).

As consumers become more articulate, they also can influence producers, in particular when they act in organised consumer groups. There are many examples of consumer actions influencing sales, for environmental or political reasons, for reasons of animal welfare, or for other, more accidental reasons. For instance, phosphate in detergents has been removed after successful consumer boycotts. Actions against oranges and oil from South Africa—before the dismantling of apartheid in 1990—have had some effect, not in the least showing support to African National Congress (ANC). Consumer boycott of fur clothing, in particular sealskin, drawing attention to the slaughtering of baby seals, led to a strong decrease in the manufacturing of fur coats. In the Netherlands, a particular brand of beer had to be taken off the market, after a famous comedian ridiculed it in his show. However, most consumer behaviour is still reactive, and not pro-active.

Communication technology and paradoxes

New information and communication technologies multiply the above-described developments. A continuing increase of globalisation, and centralisation in multinational firms, is accompanied by a decentralisation of decision-making procedures, both enabled by the use of ICT. A further task division in production was made possible by the separation of time and space (Giddens, 1991). While the industrial development caused a strict separation between work and home, with the aid of ICT an opposite development can be observed: Boundaries between work and the private sphere are blurring. People work from home with the aid of ICT (Casimir, 2001) and perform private activities—phoning home, chatting, searching the Internet for private matters—at work (Bouwman & Der Duin, 2007). And though individualisation is still increasing, symbolised by the individualised mobile phone (or better: the smart phone), at the same time, some authors notice a shrinking sphere of individual responsibility and individual decision making (Geser, 2004). The mobile phone gives employees the opportunity to ask on the spot how to proceed. It enables shoppers to consult friends or family members before making a purchase decision. Nicholas Carr even suggests that “Google is making us stupid” (Carr, 2008). On the other hand, consumers are better equipped to make the right choices, by acquiring information even in highly complex urban environments (Geser, 2004).
ICT in daily life

The cell phone, which began as a tool for emergency calls and instrumental usage, is now used for routine cases and expressive communications. The mobile phone is an individual device, directly connected to one person, sometimes even felt as an extension of that individual (Geser, 2004). People feel helpless or even panic when they forget or lose their phones. One of the effects in daily life is that communication is no longer a family matter, but a personal thing. Parents no longer distribute communication among the family members, and thus do no longer control the communication patterns of their children, being no longer the ones answering the telephone. At the same time, as in industry, while being very individualistic, individual decisions seem to decrease. The mobile phone, and all other communication devices and networks—MSN, Hyves, Facebook, Twitter—release people from the need for planning: One does not have to make strict appointments, one can always phone from the supermarket when the shopping list was forgotten; one can always phone home when late for dinner, or contact friends to discover where the best party is.

The device is also used by parents to “keep their children on a leash” by keeping them in contact and controlling their whereabouts.

Thus, when growing children increase their range of independent locomotion and increase their times of absence from home, the cell phone can help to cushion these emancipative processes, thereby making them more gradual and less traumatic by keeping children connected to their parents by a communicative link—however sporadically it may be used. (Geser, 2004).

The consequence is, according to Geser (2004), that individuals may become less likely to learn how to behave conformably in new colloquial gatherings and groups.

What applies to parents and children also applies to, for instance, labour migrants. The transition from one city to another, or from one country to another, can occur more gradually using communication technology. As Geser states, the mobile phone “offers opportunities for complexity avoidance and regressive social insulation” (Geser, 2004, p. 10). More than landlines, mobile phones are used to strengthen already existing networks, and not to expand social interaction to a wider circle. This is because users themselves control who is part of this community and who is not, by deciding to whom they make their phone numbers known. In this way, they have the capacity to re-establish the informal communication typical of traditional communal life, thus “counteracting the losses of communalistic social integration caused by traditional media as well as the depersonalizations of modern urban life” (Geser, 2004, p.10).

Mobile phones accentuate the difference between the “socially integrated” and socially marginalised people. Being without a mobile phone means that no one needs to get in touch with you at all times. The mobile phone incorporates the network of friends and relatives to whom one belongs, a network that is virtually “in” the mobile phone (Horst & Miller, 2005). People use their mobiles to connect, but also to absent themselves from their present surroundings. Women on their own in cafes or on trains use their mobiles as “barrier” signals to indicate to predatory males or other possible intruders that they are unavailable (Geser, 2004).
Consumer-citizen paradox

One of the most pregnant paradoxes in daily life is the consumer-citizen paradox, the first being the one who actually buys products, the second having attitudes and opinions concerning society. Both roles, present in every person, often argue with each other: Citizens’ values concerning sustainability or social responsibility might be conflicting with a short-term orientation on personal welfare and value for money (Casimir & Dutilh, 2003).

Consisting of billions of individuals, the position of consumers is a rather weak one. Their power is to buy or not to buy. Companies are addressing them through the market, in severe competition with each other. The position of citizens, however, is different from consumers: They are organised in NGOs and exert power by mobilising the public, campaigning for animal welfare, fair trade, or sustainability; or against pollution, social abuses, or gene technology. In consultation with these groups, companies are each other’s colleagues (Casimir & Dutilh, 2003).

The use of communication technology increased the power of NGOs tremendously. Both the speed and reach of information dissemination grew exponentially through computer networks, e-mail services, and other means of communication. Already in the 1980s, years before the introduction of the World Wide Web, action groups communicated through electronic networks like FidoNet, to inform others about, for instance, illegal logging in rain forests. The possibility to harass companies with e-mail bombs, organise demonstrations within a few hours, and spread information all over the world within seconds is not just interesting: It changes the world. Images of natural disasters and acts of terrorism or religious oppression are sent immediately as they happen. The impact of these images cannot be underestimated. Establishing virtual communities in their area of expertise, the NGOs bind their members and supporters, offer them the latest news, and influence consumers on the one hand, and governments and businesses on the other.

Also, individual consumers benefit from communication technology. They are better-informed and more self-confident than ever before, since they can compare prices and characteristics of products and the service of distributors. Holidays and business journeys are more often than not booked through the Internet. Subscriptions to competitions are in many sports only possible on line; result lists are electronically available shortly afterwards, and sometimes even in real time during the competition. Information is exchanged, including tips on where to be for the best party, a rare bird, or the “best” fight.

Increasing or bridging the gap

Discussions are continuing about the question of who is benefiting from these developments. Since young people grew up with Internet and mobile phones, they seem to be ahead of the older generation. However, in the Netherlands, 81% of 12-15-year-old children use the computer and Internet almost daily, opposed to 89% of 15-25-year-olds and 90% of 25-35-year-olds (Statline, 2011). In addition, in one study older people appeared to apply Internet search strategies that were as good as or even better than those used by younger participants. Adolescents might be better in handling the buttons, but they do not necessarily possess better information-searching skills. Efficient and inefficient users of the Internet are
represented in both age groups. Education proved to be a better predictor than age (Van Deursen & Van Dijk, 2008). Highly educated people acquire more experience with Internet: 92% of highly educated Dutch citizens used the Internet daily or almost daily in 2010, opposed to 78% of people with less education (Statline, 2011).

At the outset of the computer age, a huge gap between male and female users could be detected. This gap is obviously decreasing. In Europe, the difference between males and females having access to the Internet decreased from 11% in 2005 to 7% in 2009 (Eurostat, 2010). In the Netherlands, in 2005 73% of men and 62% of women used the Internet almost daily. In 2010, these figures were 87% for men and 82% for women (Statline, 2011). And like women use mobile phones as much as men do, we see them also increasingly making use of the Internet, including social media. In addition, women are increasingly using on-line banking and teleshopping. Only in some areas, like downloading software or music, are women still behind men in Internet use (Eurostat, 2010; Statline, 2010).

Interesting are the opportunities for physically, and possibly also mentally, disabled persons. A person can take on any identity on the Internet, and others cannot see what that person looks like or how long it took to compose a message. Also, the deaf community now has a level playing field with the hearing community, as ICT delivers opportunities not possible beforehand (May & Hearn, 2005).

The last gap to address is the gap between developed and developing countries. Of course, computer and Internet use in developing countries is still lagging behind the developed countries, but some countries benefited from the dialectics of progress: They almost skipped the phase of the fixed landlines and proceeded to using mobile telephony, which is cheaper to install and maintain, in particular in countries that have remote and impassable areas or are heavily distressed by inundations or other natural disasters. Bangladesh is such a country; the number of mobile telephones increased rapidly between 2003 and 2007, from almost zero to 35 million (Zabir, Ashir & Yasuura, 2008).

Four main factors decide the growth of the ICT market: an active market approach of industry; rules and regulations of the government; funding schemes of national or regional banks; and cultural traditions in the country at stake. For example, Jamaica saw a tremendous growth in mobile telephony, while in not-so-far-away Trinidad the Internet became the main means of communication (Horst & Miller, 2005).

A research agenda

The overview of Geser (2004) is—in the light of fast developments in the last decade—dated. For that reason, a literature search has been executed in the Scopus database (2011). A search was performed with the following search expression: (“communication technology” OR ICT) AND (household* OR domestic OR “private sphere”) for the years 2004 up to present, yielded 219 titles. Many of these articles had a technical background: They were discussing installations in the home (5), energy or energy saving (18), forms of “smart” technology (13), or other technical subjects. A fifth of the articles (51) stemmed from a more or less technological source, the Institute of Electrical and Electronics Engineers (IEEE), a professional association dedicated to advancing technological innovation, being part of IEEE.
conference proceedings, or published in IEEE scientific journals. Sixteen articles were about health and/or ageing. Despite the word “household” appearing in either the title or the abstract of a quarter (61) of the articles (61), they did not address household organisation, domestic labour, or other domestic activities. When excluding the subject areas engineering, computer science, agricultural and biological science, medicine, mathematics, earth and planetary science, immunology and microbiology, biochemistry, genetics and molecular biology, chemistry, physics and astronomy, chemical engineering, pharmacology, toxicology, and pharmaceutics, 98 records remained.

A second search was conducted with the following search expression: (ICT OR "communication technology") AND (adolescent* OR youngster* OR "young people"), with the above-mentioned subject areas excluded. This yielded 98 records as well.

Many (32) of these latter articles were about education: using ICT in schools or educational programmes about ICT and ICT use.

Figure 1 gives an overview of the articles per year of publication; Table 1 the codes assigned to the abstracts of the articles.

![Figure 1 Number of articles found in Scopus retrieved July 26, 2011](image)

Series 1: general articles ("communication technology" OR ICT) AND (household* OR domestic OR "private sphere")

Series 2: articles about adolescents/young people (ICT OR "communication technology") AND (adolescent* OR youngster* OR "young people").
Table 1 codes assigned to abstracts retrieved July 26, 2011

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Series 1: general articles ("communication technology" OR ICT) AND (household* OR domestic OR "private sphere")

Series 2: articles about adolescents/young people (ICT OR "communication technology") AND (adolescent* OR youngster* OR "young people").

The literature shows that increasingly, people, and in particular adolescents, make use of communication technology—mobile telephony and the Internet, or integrated forms of the two—for mutual communication and consultation. Constant reachability seems to increase peer group influence and social control. Social control is also exerted in parent-child relationships. With the aid of mobile telephony, physical mobility of children increases, while virtual connectivity enables contact and control (Katz, 2003/1999; Katz & Sugiyama, 2006; Kaare, Brandtzg, Heim, & Endestad, 2007; Punamäki, Wallenius, Höltö, Nygård, & Rimpelä, 2009). These processes are assumed to influence the participation of school-going adolescents in family life and domestic organisation.
On the basis of the above, the following hypotheses can be formulated:

- Due to the application of ICT, school-going adolescents living at home will participate less in family life and domestic organisation, in favour of participating in their ICT-created and ICT-facilitated worlds.
- Through its communication potential, ICT facilitates the integration of family life and improves the effectiveness of domestic organisation.
- ICT helps adolescent school-going children with separated or divorced parents to manage communication with both and enhances the sense of belonging to the households of both parents.

Though many of the articles mention the word “household,” none of them addressed household organisation or domestic labour. The concept itself is also not discussed. The vast application of ICT does not only affect practical matters, it also has an influence on concepts. It is plausible that the idea of what a household is, and to which household someone belongs, has changed as a result of ICT: Communicating on a daily basis with “home,” even when home is a hemisphere away, strengthens the ties and the feeling of belonging with the household that has been left for a long period of time. To test this idea, foreign students, who stay temporarily in the Netherlands, will be interviewed. The main research question is: Does communication technology change their perception of the household?

These ideas are in the process of elaboration at Wageningen University, the Netherlands. Applications for research funding have been submitted; an article on the concept of household will be published in 2011 (Casimir & Tobi, 2011). Whoever wants to join us is very welcome!

Biography

Home economist Gerda Casimir worked in Home Economics teacher training, and in Communication Systems Management. Her doctoral degree was based on ‘The impact of telecommuting on the division of labour in the domestic setting’. Currently she is assistant professor at Sociology of Consumers and Households in Wageningen. Gerda.Casimir@wur.nl

References


Craft Cooperatives Using the Internet While Supporting Sustainability and Globalisation

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Abstract

By examining the strategy used by two cooperative groups in two developing countries, Madagascar and Bolivia, it is clear that on the one hand, they can develop strategies that work for each on an individual basis, while on the other hand they work in a similar fashion to maximise their skills and improve their level of diversification. In this way, they can use traditional skills to improve their living standard. These groups are typically very interested in sustainability and find that, by establishing sustainability, the promotion of their work becomes more effective. The Internet provides a means of securing a global market and hence globalisation.

Key words: globalisation, sustainability, craft co-operatives

Introduction

Rural migration describes the movement of people from the countryside into urban centres. This is frequently used as a solution for recurring seasonal and/or continual hardship. The decision to undertake this migration has far-reaching ramifications for the entire family unit but, because it is usually made in times of crisis and as a last resort, reasons and/or alternatives are rarely analysed. Expected and unexpected outcomes may not be fully explored.

Traditionally, the majority of any one country’s population practised agriculture and, in this way, utilised most of the arable land within that country. For a variety of reasons, this relationship is changing. Some or all of the land may have been expropriated for other uses, such as mining, road and rail infrastructure, industrial and/or retail development, and even recreational activities. Families may have outgrown the capacity to ensure that everyone could derive a living from the land, with the outcome that some within the family have relocated. For reasons that are unclear, some farmers are experiencing weather and/or insect devastation and crop failures. Due to any or all of the above circumstances, farming families are finding that their formerly reliable means of living is in jeopardy and are required to make difficult decisions. For some parts of the world, relocation has a longstanding history. For others, it feels fresh and raw.

Many studies have examined the viability of rural villages, with diversification arising as an indicator for an improved likelihood for successful living circumstances. The objective of this study is to examine two successful projects – one in a rural area of Madagascar and one in an outlying area of Bolivia—in terms of the product that they are producing, the viability of
producing this product, bringing the product to their clients, and, finally, the sustainability and globalisation of their activity.

This study, with its focus on issues in developing countries, is important for two fundamental reasons. Rural villages are the source of agricultural products. They supply food for a country’s people. Equally important, however, is the potential acquisition of foreign capital through exportation of agricultural products to other countries. Meanwhile, the cities in developing countries are burgeoning with the influx of people. The infrastructure cannot support added population. There are few jobs available to those migrating into the cities looking for opportunity. With a lack of jobs and yet a need for resources, people become desperate and resort to crime which in turn further devastates the infrastructure of an already fragile city.

**Literature review**

Urban centres have become the panacea for the rural poor. Yet, in a study conducted to reveal the relationship between migration and subsequent employment, Wiggins and Diesinker (2007) found that not only was a decent job unlikely, many people experienced extreme difficulty. Coming from the rural areas, where exchange and bartering remained possible in addition to the presence of a support network through friends and family, people were ill-equipped to deal with a city where absolutely every need required cash (Wiggins & Diesinker, 2007). On the other hand, while people are living rurally, they are able to maintain some level of security despite arduous working conditions.

Anriquez and Stloukal (2000) found, in their study on the change of a population’s demographics, that people in a rural setting often encourage their youth to leave the land to find opportunities. Assuming that life in the city will be easier, parents and grandparents support this move, while remembering how hard they have had to work all of their lives. The youth likely will never return. They find their way. Some have the good fortune of receiving some education. Regardless, the outcome is significant. They never learn the farming practices of their elders, reinforcing the reasons for not returning. They leave their elders to farm the land on their own. As the parents age, this becomes increasingly difficult. Ultimately the land will need to be sold, resulting in another family’s loss of basic resources. The land may never be farmed again (Anriquez & Stloukal, 2000).

Initially, when families move to the city, they might move in with friends or relatives. They will likely have difficulty finding suitable long-term work and housing. For any number of reasons, some within the family unit might return to their village, resulting in difficult and disruptive separations. Therefore, regardless of the difficulties, maintaining a rural presence can often be the better alternative. Finding the resources to stay in a rural setting is the challenge.

In a study of rural livelihoods in the Lake Chad Basin, Bene et al. (2003) stated that inland fisheries played a positive role in village life by providing heterogeneity within the community and therefore improving their strategies for success. The cushion provided by another source of income enhanced the quality of life (Bene et al., 2003). Similarly, in a study conducted by Thanh, Anh, and Tacoli (2005), they discovered that non-agricultural yet income-generating
activities permitted two successful strategies. Money generated from non-agricultural activities was used to invest in the needs of the household agricultural activities. Also, over time, the proportion of non-agricultural activity, in this case craft production, increased relative to the agricultural component (Thanh, Anh, & Tacoli, 2005).

Cooperatives, often initially established to satisfy a particular need, have become a successful way of teaching skills, learning about financial planning, applying marketing strategies, establishing product development, and ensuring effective shipping and handling of incoming supplies and outgoing product. Some of the skills are directly related to the products that they are producing. Others support the cooperative, such as book-keeping skills and learning about the Internet. The premise of the cooperative structure is that the organisation is democratically run from within the membership, that profits are shared, and that some of the profits are held back by the cooperative for future development and/or for distribution to other cooperatives as start-up funds. Aarong, a fair trade cooperative in Bangladesh that was started in 1978 specifically to ensure that the silk farmers of Manikganj were paid, is such an operation today. Today they still make and sell items made of that same silk that they used so many years ago. Now there are over 65,000 artisans, with 85% of them women (Anon., 2010).

When the Asian Development Bank began exploring means of fighting poverty, they found that not only were women’s cooperatives successful, the quality of the women’s lives, once they were involved with a cooperative, improved. The women were able to work at home, which allowed them to continue with their other responsibilities such as food preparation and the care of children and animals. Also, the women often lacked mobility and/or practised gender segregation. Therefore, they preferred working from the home. Initially, many of the women lacked self-esteem, education, and resources. They did not understand product development or marketing. Through the support of the cooperative, the women became empowered. An exchange of knowledge occurred. Women began teaching other women the skills that they knew. Micro-loans from other cooperatives became a possibility. Today, 30-40% of the women in the Northwest Frontier Province are engaged in cooperative craft production, often in addition to the other work that they do (Asian Development Bank and ASR/Institute of Women’s Studies, 2010).

Although a second source of income is liberating for the farmer, the product must still be made available to their clients. For artisans this means bringing their wares to the buying public. This remains one of the biggest hurdles for artisans. For this reason, many have linked with organisations such as Ten Thousand Villages, Serrv and/or Novica to help bring their product to the marketplace in bigger centres and, more importantly, to the international buyer (Wilson, 2010; Anonymous, 2009; Bednar, 2009; Edwards & Hadden, 2000).

**Sustainability**

Throsby (2001) penned a basic description for sustainability, explaining that the intent of the term was to make us aware of, and to help us strive towards adopting, activities that can continue today without compromising either the living conditions or the ability to maintain the activity for future generations.
McDonough and Braungart (2002) in their book, Cradle to Cradle, discuss sustainability in local terms. They look to cultures around the world and honour their differences, often linking these differences to the environmental anomalies that exist locally. For centuries, social entities existed while only minimally affecting the natural world around them. Understanding and maintaining these differences, rather than trying to make all societies behave in the same way, plays a role in sustainability as a whole. Localised art/craft production is a serious and consuming part of this picture (McDonough & Braungart, 2002). The sustainability of a culture's art/craft form achieved by maintaining its meaningfulness in today's context is therefore an aspect that warrants attention. Sustainability of the art/craft forms ensures that the activity itself remains culturally significant. The current generation inherited this culturally significant activity and the current generation must ensure the viability for the future.

Globalisation

In the context of this paper, globalisation refers simply to the strategy of bringing products to an international buying public. Usually, when speaking of cooperative craft output, we are not engaged in overarching trade agreements that are intended for the larger multinational corporations. However, producers still deal with logistical issues as they attempt to stay relevant within the international context.

Objectives

The objectives of this study were to visit and examine artisan cooperatives that are both successfully making and marketing their products. By analysing their strategies, it is hoped that their methods will become helpful in establishing good strategies either for existing cooperatives or new cooperatives in the future.

To accomplish this objective, the author visited two cooperatives—the Association Tambatra, in Soutanana, Madagascar and the Asociacion Artesanal Minkha in Cochabamba, Bolivia.

Association Tambatra Soutanana, Madagascar

The Betsileo people live in the central plateau region of Madagascar. They maintain strong ties with their ancestors, not only by revering them but also by acknowledging that the ancestor’s pleasure will reflect on their good fortune while living on the earth. In honouring the dead, they celebrate their ancestors by wrapping the bodies in shrouds called “lambamena.” When a family member dies, families celebrate all ancestors by gathering at the family tomb and rewarping all of the bodies interred therein. This is a time of great celebration and storytelling, remembering all who have gone before them. At this time there is a need for a large quantity of lambamena. Consequently, the women are constantly preparing fibre for the weaving. Betsileo people view life differently from how we do. They see life as a temporary stage, and believe that in fact life is short compared to the length of time that one is dead. They prepare for their own death by living an honourable life, while working to prepare the fabrics that can be needed at any time to accompany their family’s funerary rituals and that will help to keep their own life in perspective (Green, 2004).
Because the Betsileo people believe that the silk from the wild and indigenous Borocera moth has the slowest rate of degradation, the most prized lambamena are made of this moth’s cocoons (Green, 2004; Peigler, 2004). Due to the ritual nature of the final product, they continue to make the cloth in much the same way as they always have; using the same techniques and tools of spinning and weaving the silk cocoons (Jennings-Rentenaar, 2008). Natural dyeing techniques, also of longstanding tradition, are used to colour the yarn before weaving.

What has changed is the ecological balance of the Malagasy plateau. Over the years, the original tapia forests have been cut down and used to produce the charcoal needed for cooking. The slow-growing tapia tree has been replaced by the faster growing white pine and eucalyptus trees. Both of these species are invasive and discourage understory growth. As an added complication, the Borocera larvae rely solely on the tapia tree for food (Peigler, 2004). Thus, this change has affected the population of this important Betsileo silk producer.

The Betsileo villagers first noticed a reduction in the understory plants within their plateau woodlands. They relied on some of these plants for medicinal purposes. They contacted government officials and studies were undertaken that indicated that the root of the problem was the presence of the white pine and eucalyptus trees. A programme was begun to re-establish the tapia forests (Jennings-Rentenaar, 2008).

The spinners and weavers of the silk have organised themselves into cooperatives. Because wood is a valued commodity in Madagascar, it was essential to establish a common goal that the tapia saplings be left to grow. Because tapia is the sole food source for the silk larvae, the villages were able to accomplish this by attaching a monetary value to the silk, thus leaving the trees as food for the larvae. By changing the dimensions of the lambamena to a size that can be used as a scarf or shawl, the product has become saleable to a larger audience, hence establishing a monetary value to the product.

Men have taken on the role as caregivers of the tapia trees and the Borocera larvae. Together, they have pooled their resources, making this silk fabric available to a wider audience and, in turn, re-establishing the original forests of the central highlands of Madagascar (Jennings-Rentenaar, 2008).

To complete the circle, the Betsileo needed to find a way of selling their scarves and shawls. They connected with the Full Circle Trade Mission as a means of selling their products on the Internet. This organisation has a mission of supporting the sustainable management of natural resources through the fair trade of products and handicrafts, the sale of which helps to support ecologically, economically, and socially sustainable livelihoods. They achieve this by consistently providing beautiful and functional products that the international community can access. The sale of these products tangibly assists both producers and consumers to build healthy, environmentally sound, and sustainable lives. Suppliers of products to this organisation are required to provide careful documentation, ensuring that they fulfil the mission requirements. Supporting wild silk production effectively restores the original tapia forest qualifying this project for this programme.
The women in the cooperative are successfully marketing a product not too unlike their original end product. The only change is simply that they have had to reformulate the dimensions. Colour and weave structure remains the same. The Full Circle Trade Mission gives their product visibility and access to the global marketplace. The mission aids the women in the logistics of shipping and handling. This effort is sustainable and completes the environmental circle ensuring the viability of the indigenous forests. This helps also to support healthy living standards for the villagers of the Malagasy plateau.

Asociacion Artesanal Minkha, Cochabamba, Bolivia

Indigenous men and women of Bolivia, Peru, Ecuador, and beyond have a longstanding knitting tradition. Typically, the products have been hats, mittens, leggings, and footwear, which have been knit in multi-coloured and complicated geometric patterns.

In the early 1990s, a small group of Quechua and Aymara women living in the outskirts of Cochabamba in Bolivia were organised with the business and financial help of Save the Children—Canada into a cooperative knitting group. They had the knitting skills, but lacked bookkeeping and logistical skills to run a more complicated entity than they were used to. The Save the Children—Canada organisation initially supported Minkha to help them receive the training that they needed. The women knit beautiful sweaters in alpaca or the finest pima cotton into contemporary styles. Because most of the women cannot read, they have had to learn to analyse sweater patterns to anticipate how they are going to knit the sweaters. These sweaters are sold on an Internet site, www.minkhasweaters.com or, in conjunction with an Internet site, are sold as special orders with the help of volunteers in North America. All profits are returned to the Bolivian women.

The women knit from their homes and, because of this, are able to integrate this activity within their other responsibilities. They coordinate their knitting with the other knitters in the cooperative. They bring their finished sweaters to a central drop-off point where they are checked for sizing and quality, blocked, finished with buttons sewn on, packaged, labelled, and prepared for shipping. They have hired an Internet-savvy bookkeeper to help them with the orders as well as help them with managing their yarn supply.

The knitters are very successful. They support their families in a way few could ever have imagined. Their success is due in large part to the fact that they are knitting at home. Many of the families are agriculturalists, with added responsibilities. These can be maintained and therefore their food supply is not affected. They are also successful because of their wonderful knitting skills, which they readily adjust to suit the contemporary fashions of the day. They are willing and able to knit to suit the likes of their market. They readily learn new designs. They also buy their supplies from the surrounding area, therefore offering something unique to the North American market, but also supporting the fibre and yarn producers of the area.

The Minkha knitting micro-industry is a Save the Children—Canada success story. The cooperative is now entirely run by the women themselves. They democratically vote in their board members every year. They democratically make all of their own decisions. The microloans have been repaid and today they are providing microloans for similar cooperatives.
requiring start-up funds. They also continue to knit products for their own use in the traditional manner.

The cooperative structure

The cooperative structure is typically a positive force. Decisions move from the individual level to the cooperative or even community level. This, in turn, can result in the community’s view of the bigger picture, for example with regards to sustainability.

Once established, cooperatives often have enough resources to support start-up cooperatives with microloans.

The Internet

The Internet plays a crucial role in the success of both of the cooperatives studied. The women from Soutanana, Madagascar were able to substantiate claims of sustainability and thus qualified for inclusion on the Full Circle Trade Mission website. This enhanced their visibility and linked them with other cooperatives around the world with similar stories to tell. Through the Full Circle Trade Mission’s mandate to educate consumers in ethical purchasing as well as provide a venue for cooperatives such as Association Tambatra Soutanana, the ideas of sustainability and ethical buying power fused, again improving the likelihood for sales. With an office in the capital of Antananarivo that includes Internet access, constant contact is possible with the women via cell phone, permitting the women to retain their preferred rural living conditions (Association Tambatra Soutanana, personal communication, July 4, 2007).

For the Asociacion Artesanal Minkha, the Internet becomes their storefront and management tool. By hiring Internet- and business-savvy office support in the larger centre of Cochabamba, the women can remain rurally situated within their villages. The sophisticated website is interactive, permitting their worldwide clientele to order online while disguising the rural origins of the sweaters (Asociacion Artesanal Minkha, personal communication, February 13, 2009).

Conclusion

Strategies may differ, yet here are two examples of artisan strategies that are successful.

Diversification is helping the people to create a source of income that, in turn, permits them to stay within their rural communities. They retain the same art/craft skills as practised by their ancestors. Sustainability is being addressed in addition to global marketing. By using the Internet, the artisans have access to a larger market, thus improving the feasibility of attracting additional clientele and, therefore, income.

Biography

Teena Jennings-Rentenaar, Ph. D., is an associate professor in Clothing, Textiles and Interiors in the School of Family and Consumer Sciences at The University of Akron, Akron, Ohio, USA, where she teaches the textile science courses. She is particularly interested in the
sustainability of indigenous arts/crafts and because of this spends time studying museum collections with the hopes of reintegrating skill know-how. She is herself a fibre artist.

References


New dimension in silk dyeing for Paithani silk dyers of Yeola

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Abstract

The “Paithani” silk sari is a textile that is celebrated worldwide. However, the dye used to colour the silk bleeds colour and affects the quality of saris. To compete in the global market, it is necessary to make the dyers aware of the correct technique of silk degumming and dyeing. Change in their traditional practices indicates acceptability of the new technique in their routine.

Key words: Acid dyes, Natural dyes, dependant variables, Colorfastness properties, post-training evaluation.

Introduction

It has been commonly observed that silk saris find a superior place in an Indian women’s wardrobe, because of their dignity, splendour, and, of course, status symbol. Silk is loved for its glamour, richness, beauty, bright colours and fashionable looks (Sinha & Kirsur, 1994). According to Meher Castelino (1993), India is surrounded by a rich heritage of textiles and “Paithani” silk sari is a traditional textile of Maharashtra state, India, which is renowned for its workmanship and wonderful creations spanning generations. The heart of this Paithani is its colour and eye-catching design. Silk dyers of Paithani, in their routine process, use direct dyes which do not give colourfast dyeing. Many complaints regarding bleeding of colour and the quality of dyed silk used to be received from customers.

Figure 1 Traditional “Paithani” Sari
Need for the study
The present study relates to the silk dyers of Yeola (Dis.—Nasik, Maharashtra) and the degumming and dyeing of silk used in highly artistic Paithani saris. Data collected for the present study indicates that the crude traditional methods of degumming and dyeing used by the dyers of create a problem during the weaving process and cause colour bleeding during dry-cleaning. It was observed that if dyers want to fulfil the market demand, they needed to change their techniques of degumming and dyeing of silk in order to produce high-quality Paithani saris.

Objectives
- To know the present practices of silk degumming and dyeing.
- To reveal the disadvantages of traditional methods.
- To introduce to dyers a new technique of dyeing and degumming.
- To make dyers familiar with “silk shade cards,” which would assist them to gain knowledge of shades and to achieve colours as per customers’ demand.

Methodology
1. Location of the study: Yeola, Dist: Nasik (M.S.)
   Yeola is a small town with a population of over 40,000, located in the eastern part of the Nasik district. It is the epicentre for Paithani weaving. Yeola was selected as the location for the study as it is the area where most Paithani saris are manufactured.

2. Sample size: 40 participants were selected from self-help groups of the National Bank for Agriculture and Rural Development (NABARD). Random sampling was used to select participants from 10 self-help groups within the dyers’ community.

3. Pre-testing was carried out to study dependant variables such as participants’ knowledge, skills, and attitudes. Pre-training evaluation required participants to use rating scales to respond to 20 items regarding their knowledge, skills, and attitudes towards new techniques.

4. Dyers were introduced to correct techniques for degumming and dyeing silk were taught about fastness tests for dyed silk yarns.

5. Post Testing: In post-training evaluation, dyers used rating scales to indicate their assess towards the new techniques of dyeing.

6. The researcher carried out the fastness tests for silk samples dyed using the traditional method, and samples dyed using the new technique. This alerted dyers to the quality of dyeing achieved through both techniques and the importance of colourfastness.
Materials and experimental methods

Data collected during the present study show that the Yeola dyers’ traditional method of degumming and dyeing silk creates problems during the weaving process. Although this dyeing profession is passed on through generations, the use of low-quality dyes causes colour bleeding. Training was given to Yeola dyers in order to overcome these problems in silk degumming and dyeing.

Traditional method of silk degumming

The purpose of silk degumming is to remove Sericin. Sericin is the protein which is present in the raw silk and which makes the silk coarse, affects lustre, and obstructs dyeing. The traditional method of degumming used by dyers of Yeola was very harsh and did not remove all of the Sericin. In the traditional method, the silk is boiled in water in a copper vessel along with soda ash, soap and coconut oil for about 1 to 1 ½ hours. The hank is rinsed in cold water and twisted harshly with an iron rod. Material to liquor ratio (M: L: R), temperature, and PH are never measured.

Drawbacks of the traditional method of silk degumming

- The copper vessels used for degumming produce metallic salts in the dye bath solution which affect the lustre of the silk (Gulrajani, 1994)
- Excessive use of soda ash and soap weakens the silk. The hydrosulphite of soda affects the fibrion structure of silk (Gogoi, 1998)
- Prolonged boiling of silk affects the silk’s lustre (Gulrajani, 1991)
- The rotating and harsh twisting of the yarn using the wooden rod causes breakages in the yarn and difficulty during warping.

New method of silk degumming:

This new method is taught to the dyers during training programmes. In this method, the silk hanks are suspended on stainless steel rods and immersed in stainless steel vessels containing degumming soap solution. The temperature of the bath is slowly increased and the hanks are treated at about 950°C for 30-45 minutes. During this period the fibres swell and become sticky and the gum dissolves. The hank is removed, and washed thoroughly 2 to 3 times with lukewarm water and then with cold water to remove all traces of soap, as otherwise the soapy impurities tend to fix themselves on the fibre causing discoulouration and difficulties in dyeing (Maulik, 2004). A comparison between two methods is given in Table 1.
Table 1 Comparison between the traditional and new methods of degumming

<table>
<thead>
<tr>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional</td>
<td>1 Kg. approx.</td>
<td>Approx.</td>
<td>100gm</td>
<td>100 gm</td>
<td>1hr.</td>
<td>Not measured</td>
<td>At boil</td>
<td>Not fixed</td>
</tr>
<tr>
<td>New</td>
<td>1 Kg. 30 times OWM</td>
<td>-</td>
<td>Degumming soap 20% of OWM</td>
<td>30 to 45 min.</td>
<td>pH</td>
<td>90°C to 95°C</td>
<td>1:30</td>
<td></td>
</tr>
</tbody>
</table>

OMW- On Weight of Material

Traditional method of silk dyeing

According to Venkidusamy (1994), silk is dyed with the application of acid, basic, mordant, vat, and reactive dyes. Acid colours are widely used to dye silk in various bright colours as they have good fastness properties, and natural dyes are becoming more popular due to the hazardous nature of chemical dyes (Gahlot, 1996). However, the Yeola dyers are using direct dyes, which reduces the quality of Paithani.

In the traditional method, the silk dyers use a “Bhatti” (a stove fired on charcoal) for dyeing. The silk is boiled in water with dye powder and common salt for 30 minutes and is then rinsed two or three times.

Drawbacks in traditional method of dyeing

- Use of low-quality dyes causes colour bleeding.
- Lack of control of temperature, concentration, and time reduces the quality and lustre of silk.
- Achievement of exact desired shade is not possible due to lack of knowledge of percent shade calculation.
- Combined degumming and dyeing in a single bath affects the fastness properties of silk (Venugopal, 1994).

New method of silk dyeing with acid dye

The training programme taught dyers the new method of silk dyeing, which includes dyeing with self shades, and creating dye mixes containing certain percentages of shades. Dye is dissolved in a small amount of water. The dye solution is then heated and added to the vessel containing the required amount of water and Glauber’s salt. The temperature of the bath is raised gradually to 90°C and this temperature is maintained for 30-45 minutes. At the end of this dyeing process, silk hanks are lifted and 1-2% of glacial acetic acid (OWM) is added into the dye bath. Dyeing is continued for a further 10-15 minutes. After dyeing, yarns are washed in water two or three times, then rinsed and brightened with the help of a dilute solution of acetic acid (Prabhu & Vijayendra, 1998).
New method of silk dyeing with natural dye

In recent years, there has been a revival in the awareness of the importance of using environmentally friendly natural dyes. Thus, this study taught dyers how to dye silk using natural dyes. The ingredients used are listed in Table.

Table 2 Ingredients used

<table>
<thead>
<tr>
<th>Natural dye</th>
<th>Lac powder</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetic acid</td>
<td>2-3% OWM</td>
</tr>
<tr>
<td>Water</td>
<td>30 times OWM</td>
</tr>
<tr>
<td>% shade</td>
<td>20%</td>
</tr>
<tr>
<td>Temp.</td>
<td>9-95 °C</td>
</tr>
<tr>
<td>Time</td>
<td>30-45 min.</td>
</tr>
<tr>
<td>Mordant</td>
<td>Alum</td>
</tr>
</tbody>
</table>

Lac powder is dissolved into a small amount of water and the solution is boiled and filtered. This filtered dye solution is added into the water (OWM) and the dye bath temperature is raised. Silk hanks are immersed into the dye solution after acetic acid is added. The dye solution is boiled at a temperature of 90-95 °C and mordanting is carried out.

Mordanting with alum

Natural dyestuffs needs additional metallic compounds, called mordants, to make the colour permanent. Alum, chrome, iron and tin are some chief mordants used on silk to darken and brighten colours (Subrata, 1992).

Table 3 Comparison between traditional and scientific method of silk dyeing

<table>
<thead>
<tr>
<th>Silk</th>
<th>Water</th>
<th>Dye Type</th>
<th>Traditional Method</th>
<th>Scientific Method for Acid Dye</th>
<th>Scientific Method for Natural Dye</th>
</tr>
</thead>
<tbody>
<tr>
<td>1kg.</td>
<td>Approx.</td>
<td>Direct Dye</td>
<td>1kg.</td>
<td>As per % shade on shade card</td>
<td>Lac powder</td>
</tr>
<tr>
<td>Approx.</td>
<td></td>
<td>Acid</td>
<td>30 times OWM</td>
<td>1-2 %</td>
<td>2-3% OWM</td>
</tr>
<tr>
<td>Dye quantities</td>
<td></td>
<td>Natural</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approx.</td>
<td></td>
<td></td>
<td>10% Glauber’s Salt</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acetic Acid</td>
<td></td>
<td></td>
<td></td>
<td>90-95 °C</td>
<td>30-45 min.</td>
</tr>
<tr>
<td>Salt</td>
<td></td>
<td></td>
<td></td>
<td>95%</td>
<td></td>
</tr>
<tr>
<td>3-4 drops</td>
<td></td>
<td></td>
<td>30 min.</td>
<td>30-45 min. for entire process</td>
<td></td>
</tr>
<tr>
<td>Coconut oil</td>
<td></td>
<td></td>
<td>At boil</td>
<td>20%</td>
<td></td>
</tr>
<tr>
<td>Temp.</td>
<td></td>
<td></td>
<td>95%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td></td>
<td></td>
<td></td>
<td>6-7</td>
<td>Alum/ Stannous Chloride</td>
</tr>
</tbody>
</table>
Result and discussion:

In this study, the dependent variables were studied after the participants had engaged in the training. These variables were tested by using rating scales.

![Pie chart showing knowledge levels]

**Figure 2** Knowledge gained in silk degumming and dyeing.

**Figure** depicts that 25% of participants attained a high level of knowledge, 62% gained a medium level of knowledge, and 13% achieved a low level of knowledge regarding the new method of silk degumming and dyeing.

![Pie chart showing skill levels]

**Figure 3** Extent of skill in silk degumming and dyeing.
Figure 3 shows that 50% of participants acquired a high level of skill, 30% achieved an adequate level of skill, and 20% did not acquire skills in the new method of silk degumming and dyeing.

![Pie chart showing skill levels](image)

**Figure 4 Attitude towards the new technique**

Figure 4 shows that 25% of participants reported highly favourable attitudes, 62% reported favourable or positive attitudes, and 13% reported unfavourable attitudes towards the new technique.

**Comparative study of fastness of samples dyed with traditional and scientific technique**

The researcher carried out the testing of dyed silk in Texan Laboratory, Thane, Mumbai. The researcher tested the colourfastness of silk dyed with the traditional method, and silk dyed with the new method.
Colourfastness to light of all dyed samples was tested under a (Mercury Ballasted Tungsten Filament) MBTF lamp. Figure shows that the sample dyed with T1 (Rodamine B-2.5% and violet B - 0.5 %) using the traditional method showed poor to fair colourfastness to light. Similarly the sample dyed with T2 (Green V - 3.5% and Yellow M -0.5%) showed poor to fair light fastness. Colourfastness to light for the samples dyed with T3 (Rodamine-2.5), T4 (Rust Brown-2%), and T5 (Maroon V-4%) using the traditional method demonstrated fair colourfastness to light. None of the samples dyed using the traditional method showed excellent colourfastness to washing (ISO: 105/c06 A1M at 40°C). These results indicate that the samples dyed with the traditional method have an undesirable level of colourfastness to light and washing.

Figure 5 Colourfastness to light and washing for samples dyed with the traditional technique.

Figure 6 Colourfastness to light and washing for samples dyed with the new technique.
Figure indicates the colourfastness to light and washing fastness of samples dyed with the new technique. Excellent colourfastness to light was demonstrated for N1 (Red 2% Orange - 1.7%), N2 (Yellow GLL 3%–Red- G1%), N3 (Red3-BN), and N4 (Blue 2G 2%– Yellow GR 1%). N5 (Turkish Blue GL-2%– Chrysophenine 3GH/C-2%) showed fair to good colourfastness to light.

The test for colourfastness to washing was carried out using “Laundrometer” (ISO: 105/C06A1M, at 40°C). Colourfastness to washing was very good for N2, N3, and N4, and good for N1. Only N5 showed fair to good colourfastness to washing.

Figure 7 Colourfastness to rubbing and perspiration for samples dyed with the traditional method

The test for colourfastness to crocking (rubbing) was carried out on “Digital Crockmeter” (ISO: 105/X12) and results are presented in Figure 7. It was observed that colourfastness to rubbing was fair to good for T2, T4, and T5 when dry, and was good for T1 and T3 when dry. When wet, samples dyed with the traditional method showed fair colourfastness to rubbing for T1, T2, T3, T4, and T5.

Colourfastness to perspiration

The test for colourfastness to perspiration was conducted using both acidic and alkaline solutions of perspiration (ISO: 105/C6A1M at 40°C). Graph 6 shows that samples dyed with the traditional technique had fair to good colourfastness for T1, T2, T3, T4, T5, in acidic and alkaline solutions. In an acidic medium, staining on acetate, cotton, and nylon was poor to fair and very poor for T5 samples.

In an alkaline solution, staining of silk on acetate, cotton, nylon, polyester, and acrylic was fair to good, and on wool was very poor to fair, for all samples.
Colourfastness to rubbing and perspiration for samples dyed with N1, N2, N3, N4, and N5, using the new technique, was assessed. Colourfastness to rubbing was good to very good for all samples, when dry and when wet, and in acidic and in alkaline solutions. It was found that in the acidic solution, staining on acetate, polyester, and wool, but not on nylon, was slight to negligible for all samples. In the alkaline solution, staining on acetate, wool, polyester, and nylon was slight to negligible, but was considerable for cotton. These results indicate good colourfastness to perspiration for the samples dyed with new technique.

The test for colourfastness to dry-cleaning was conducted for the samples dyed with traditional technique as well as the new technique of dyeing.
All samples dyed with traditional technique (i.e., T1 to T5) showed poor to fair colourfastness to dry-cleaning and poor to fair staining of solvent. The samples dyed with the new technique (i.e., N1 to N5) showed good to excellent fastness to dry cleaning and staining of solvent was good to excellent.

Figure 10 Percentage of participants who implemented the new technique in silk degumming and dyeing in their professional routine

Figure 10 shows that after participants were trained and made aware of colourfastness tests, more than 72.5% of participants felt the new method is better than traditional method. The new method gives fast colours and perfect shades, and maintains the lustre of silk. The participants who did not adopt this technique (27.5%) may have been concerned about the limited availability of acid dyes and acetic acid, or believed that the new technique was too time consuming given their heavy schedule of weaving.

Conclusion

The post-training evaluation shows tangible changes among the dyers of Yeola, namely, their acceptance of the new, improved technique in their routine practices. An evaluation of the overall impact of the training indicated that more than 60% of the trainees accepted the new technique over the traditional technique.

Recommendations

The following recommendations are given by the researcher:

1. Capacity-building Intervention: Dyers in the Yeola town do not have any single organisation to unite them and assist them to gain the bargaining capacity necessary for capturing the market and bulk-buying raw materials. Group dynamics would need to be considered during the establishment of a cooperative society of dyers.
2. Quality-control Laboratory: The quality of Paithani saris depends on the quality of the silk yarn, the dyeing process, and the jari yarn. Fastness tests are necessary to ensure that customers' demands regarding quality are met. The unavailability of a facility in which to conduct such tests may result in continued poor practice and dissatisfied customers. Therefore, the establishment of quality-control laboratory in Yeola is important.

3. Standardisation of Eco-labelling of Paithani: Introduction of eco-labelling standards for Paithani would allow them to be more easily promoted as an exportable item, particularly to European and US markets.

Biography
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References


Better citizens? The relationship between home ownership and religious and political volunteerism in the United States

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Abstract
What is the relationship between homeownership and citizenship, as measured by religious and political voluntarism? Tenure is a matter of choice. Use of a choice variable as a key independent variable in estimations leads to omitted variable bias. With this in mind, this study uses before and after comparisons with two waves of Panel Study of Income Dynamics (PSID) data. The expectation is that estimating the relationship between homeownership and religious and political voluntarism may be less clouded by omitted time invariant variables.

This study finds no significant relationships between homeownership and citizenship as measured by religious and political voluntarism given data at hand, variables used, and estimations based on before-and-after comparisons. The implication of this study is that individual community participation as measured by religious and political voluntarism is not stifled by tenure decisions. The assumption that homeowners are better citizens resulting from increased religious and political voluntarism may be unfounded.

Key words: homeownership, tenure, political voluntarism, religious voluntarism, citizenship

Introduction
What is the relationship between homeownership and citizenship, as measured by religious and political voluntarism? The citizen volunteer gives time and effort as a means of maintaining humanitarianism (Cohen, 1960). Sieder (1960) states that it is imperative for citizens to actively engage themselves in this improvement process. With the hopes of increasing positive outcomes, policy supported by taxpayer dollars has historically encouraged and favoured homeownership in the United States (U.S). Rossi and Weber (1996) state policies that intend to improve expected homeownership outcomes are supported by weak and inconsistent evidence in literature. On average, US consumers prefer owned to rented property. According to the US Census Bureau (2005), by the second quarter of 2004, homeownership rates reached a historic high of 69.2%. Theory also indicates ownership as the tenure preference (Morris & Winter, 1975).

Dietz and Haurin (2003) acknowledge an association between homeownership and outcomes including those related to wealth building, household mobility, labour force behaviour, housing maintenance, social and political activity, child outcomes through the provision of a more stable environment in which to raise children, and health, including better environmental health through proper home maintenance. Dietz and Haurin also observe that much of the previous 30 years’ literature related to homeownership outcomes has been theoretically or technically deficient.
One such deficiency concerns omitted variable bias. Motivation and other similar factors may be relevant to the relationship between homeownership and outcomes, but omitted from datasets. These omissions lead to omitted variable bias. Minimising omitted variable bias is crucial to obtaining credible results from estimations. In an attempt to reconcile some deficiencies, this study seeks a better understanding of the relationship between homeownership and religious and political voluntarism.

**Homeownership, volunteer, and voluntarism defined**

The term homeownership refers to the state of living in residential properties whose tenure status is owned. The word volunteer is used to indicate the act of freely offering oneself as a volunteer (Webster, 1971). Volunteers are defined as those who freely work without pay or material benefit (Marshall, 1964; Sieder, 1960; Verba, Schlozman, & Brady, 1995; Wilson & Musick, 1999). The narrowest definition of voluntarism refers to the principle of using or relying on voluntary action to do or sustain something (Webster, 1971). Per Merriam-Webster (2009), voluntarism is synonymous with volunteerism. The United Nations (2008) recognises that volunteers, regardless of national identity, play a crucial role in human development and social change.

**Voluntarism as an appropriate measure of citizenship**

Per Kymlicka and Norman (1994), citizenship may take two forms. First, legal membership in a community defines legal citizenship. Second, extent and quality of community participation defines citizenship as desirable activity. Measuring citizenship based on desirable activity places emphasis on personal virtue and community responsibility. This study focuses strictly on citizenship as desirable activity. It may be easy to see why political voluntarism may factor into citizenship. The connection between religious voluntarism and citizenship is less direct, but important nonetheless. Spinner-Halev (2000) notes an overlap between virtues associated with citizenship and what he calls the autonomous person, or one that interprets tradition and experience in a manner unique to that individual. Spinner-Halev discusses that the autonomous person concept overlaps with that of the good liberal citizen, stating these individuals are able to think critically, absorb and reflect on other views, and act with sincerity towards others. Spinner-Halev also observes that public morality depends on private virtues, and religion serves as one mediating factor between the individual and other institutions of civil society.

**Theoretical context**

Given neoclassical economic theory, it is assumed that consumers are aware of all available choices and make beneficial decisions, a budget constraint restricts behaviour, and consumers have a given set of preferences and are consistent in their preferences. Human capital, as popularised by Becker (1962) refers to activities that establish resources in people; these activities and resources influence future income. As illustrated by Bryant and Zick (2006), consumers increase human capital by investing in themselves, and self investment is an important form of saving.

Although neoclassical economic theory and human capital theory are important to this discussion, they cannot fully explain the intricacies associated with all aspects of decision making related to religious and political voluntarism. Therefore, social capital theory is used to help explain why individuals choose to engage themselves as volunteers. Here, it is assumed that consumers establish relationships with the hopes that these relationships will
lead to some positive gain. Becker (1974) argues that two primary means motivate charitable relationships. These relationships create a synthetic family, where members give to each other to help insure against future loss. Individuals may form charitable relationships as a means of avoiding contempt or gaining community recognition. This fits well in the context of religious and political voluntarism, as both provide opportunity for community recognition and refuge from contempt.

Empirical literature

Homeownership and political voluntarism

Some earlier empirical literature reveals modest to tenuous relationships between homeownership and religious and political voluntarism. For example, homeowners were found to be more knowledgeable about their communities than were renters (Sykes, 1951); community attachment measured by owning a home had a positive influence on local political involvement (Alford & Scoble, 1968); permanence of social relations influences participation (Steinberger, 1981); homeowners were more likely to be activists than were renters (Cox, 1982); friendships play a role in local political activity (Guest & Oropesa, 1986); neighbourhood organisations may be attended in greater numbers and be more effective in neighbourhoods with majority homeowners (Guest & Oropesa, 1986). Econometric drawbacks of the previous studies include use of limited or regional data and insufficient statistical analysis.

Econometric drawbacks of the previous studies include use of limited or regional data and insufficient statistical analysis.

Subsequent authors built on this body of knowledge and examined the relationship between homeownership and political participation in a theoretical context using more comprehensive datasets and more sophisticated econometrics. These studies reveal more mixed results. For example, homeowners did not show a significant increase in local political participation relative to renters (Kingston, Thompson, & Elchar, 1984); male and female homeowners were more inclined to vote in the presidential election but were not more likely to work on a campaign (Kingston & Fries, 1994); homeownership had no effect on political attitudes, but did have an effect on voting rate (Gilderbloom & Markham, 1995); social capital accumulation is affected by housing structure (Glaeser & Sacerdote, 2000). Despite using nationally representative data better suited to increasing external validity, the majority of these previous studies do not address the fact that homeownership is a matter of choice. The authors recognise that this choice element prohibits inclusion of unmeasurables or unobservables— independent variables important to the research questions.

Homeownership and religious voluntarism: social involvement

Regarding religious voluntarism, the scope of literature is broadened as scant empirical work that focuses exclusively on the relationship between homeownership and religious voluntarism exists. As with political voluntarism, earlier social involvement research revealed limited findings. For example, homeowners were more likely to join voluntary organisations and engage in local social networks (Blum & Kingston, 1984); differences between owners and renters are not due to demographic or socioeconomic differences (Ditkovsky & van Vliet, 1984); having close ties in the neighbourhood was positively related to being active in neighbourhood improvement organisations (Oliver, 1984); greater social participation is not an outcome of homeownership (Rohe & Stegman, 1994). Again, subsequent authors were able to use more comprehensive data and econometrics to increase external validity and produce other results. For example, homeownership had a slight impact on social participation (Kingston & Fries, 1994); few differences existed between owners and renters regarding participation in religious social networks (Rossi &
Weber, 1996); homeowners invested more in social capital (DiPasquale & Glaeser, 1999); those who invest time in formal organisations were more likely to be homeowners and more permanent residents (Putnam, 2000).

Conclusions drawn from theoretical and prior empirical work constitute the basis for constructing the main hypothesis. This study uses the hypothesis that homeownership has no relationship with citizenship as measured by political or religious voluntarism among individuals.

Methods

The following utility function (Equation 1) describes the wellbeing of a consumer as illustrated by consumable goods, volunteer opportunities, tenure choice, goods bought with income, education, religion, and taste shifters that may influence utility.

\[ U = f (a, b, c, d, e, f, g, h) \]

Where:
- Consumable goods = a
- Volunteer opportunities = b
- Tenure choice = c
- Good bought with income = d
- Education = e
- Religion = f
- Taste shifters = g
- All other goods = h
- Individual = i
- Number of entities = n

Equation 1. Utility function describing wellbeing as a function of selected variables.

Equation 2 demonstrates that the need for service, desire to serve, and the price of volunteering fundamentally determines supply of volunteers. The price is the cost of leisure time (wage rate of volunteer).

\[ Q^S (V) = f (S_D, D_S, W) \]

Where:
- Service demanded = SD
- Desire to serve = DS
- Price of volunteering = W

Equation 2. Supply function for volunteer as a function of service demanded, individual desire to serve, and price of volunteering.

Equation 3 demonstrates that the demand for homeownership is driven by price of homeownership, price of renting, income, and taste shifters. Each variable may uniquely influence demand.

\[ Q^D (H) = f (P_H, P_R, I, P_A) \]

Where:
- Price of homeownership = PH
- Price of renting = PR
- Income = I
- Taste shifters = PA
Equation 3. Demand function for homeownership as a function of price of homeownership, price of renting, income, and taste shifters.

Data selection and variable choice

The Panel Study of Income Dynamics (PSID) dataset was chosen to address the research question. As required by the PSID: “The Panel Study of Income Dynamics is primarily sponsored by the National Science Foundation, the National Institute of Aging, and the National Institute of Child Health and Human Development and is conducted by the University of Michigan” (University of Michigan, n.d.). External validity is strengthened as the PSID is a nationally representative dataset with a large sample size. As of 2005, PSID researchers collected data on approximately 7,500 US families. Internal validity is strengthened as PSID features appropriate variables.

Family-level data feature a number of variables related to voluntarism, and are thus used. Individual-level data do not include volunteer variables, and are not used in this study. The head of the household is defined as follows. The head must be at least 16 years old and hold the most financial responsibility for the family unit. If this person is female, then she is head. If the person is female and married or has been living with a boyfriend for greater than one year, then the husband or boyfriend is head. If this male is somehow incapacitated, then the female is head (University of Michigan, 2009c). Since family-level data are used, it is important to account for action taken by not just by the head, but also the wife. PSID make no distinction between wife and “wife,” and thus the term “wife” captures marriage and cohabitation. Wife may refer to a married or cohabiting woman.

Key independent variables (religious and political voluntarism) ask how often heads (male or female) and family (head and wife) volunteer, measured as a continuous variable with values ranging from 1 to 97. How often individuals volunteer, as opposed to number of memberships, captures the process by which individuals engage in voluntarism. The religious voluntarism measure asks participants about serving on a committee, assisting in worship, teaching, or helping others through programmes organised by place of worship (University of Michigan, 2003a). This measure does not include volunteering through schools, hospitals, or other charities run by religious organisations (University of Michigan, 2003a). This study makes no distinction between different faiths. Political voluntarism consists of that which occurs only through organisations that bring about social change, such as civic or community action, and working for a political party or advocacy group (University of Michigan, 2003b). This measure does not include voting.

Panel data with two time periods and before-and-after comparisons

It would be thoughtless not to exploit the richness inherent in panel data. Therefore, this study will use two waves of PSID data (2003 and 2005). These two years feature repeated observations on the same individual for the same variables of interest, and therefore allow consistency. Repeated observations on the same individual may be used to construct before-and-after regression models that control for omitted variables important to the research question, but not captured in the data as they are hard or impossible to measure.

Per Stock and Watson (2007), before-and-after estimations compare values for variables in the second period (2005) to variables of the first period (2003), or $i_{2005} - i_{2003}$. In other words, the change in variables is included in specification. Continuously measured variables
are simply subtracted. Dummy, or binary, variables are compared as well. For example, the dummy marriage variable equals one if respondent is married, and zero if respondent is not. When 2005 dummy values are compared to 2003 values, one of three values may occur: negative one, zero, or one (-1, 0, 1). Before-and-after comparisons prohibit the inclusion of time-constant variables, such as race and gender, by themselves (Stock & Watson, 2007). Equation 4 demonstrates a generic before-and-after specification.

$$y_{it} + 1 - y_{it} = \beta_0 + \beta_1 (x_{it} + 1 - x_{it}) + u_{it} + 1 - u_{it}$$

**Equation 4.** Generic before-and-after specification.

**Before-and-after comparisons: assumptions**

In order to obtain more credible results, certain assumptions must be addressed while using panel data with before-and-after comparisons, per Wooldridge (2006) and Stock and Watson (2007). It is assumed that the value of the error term ($u_{2005} - u_{2003}$) given independent variables is zero. Known as zero conditional mean, this assumption implies that there is no omitted variable bias. This study takes measures to prevent omitted variable bias by using theory and empirical literature in developing models. Second, it is assumed that variables for one individual are distributed identically to and independently (i.i.d.) of the variables for another entity. This assumption holds if simple random sampling is used to select observations. As stated by the University of Michigan (2009), PSID is not based on a simple random sample. It is suggested that variables ER31996 and ER31997 be used for computing sampling errors (University of Michigan, 2009b). Third, it is assumed that large outliers, which have the ability to produce deceptive results, are unlikely. Mendenhall and Sincich (2003) suggest using the statistical measure, Cook’s Distance (Di), to determine the overall influence that outliers may have on estimated coefficients. This study eliminates outliers based on Cook’s Distance (Di), as suggested by Stock and Watson (2007).

Fourth, it is assumed that there is no perfect multicollinearity among independent variables. Multicollinearity occurs when moderate to high correlation occurs between two or more independent variables (Mendenhall & Sincich, 2003). Perfect multicollinearity occurs when categorical variables are used without reference categories; this is referred to as the dummy trap. To avoid this dummy trap, appropriate variables are omitted from models as reference categories. Additionally, per Mendenhall and Sincich (2003), any variance inflation factor (VIF) value greater than 10 indicates severe multicollinearity. Per Ott and Longnecker (2001), VIF values equaling one indicate no collinearity. Multicollinearity presents no issue with any of the models as all values obtained are close to one; no value is greater than two.

Wooldridge (2006) states that homoskedasticity is the final assumption. Per Stock and Watson (2007), homoskedasticity refers to constant variance of the error term given independent variables. The term heteroskedastic refers to error terms that are not constant. Heteroskedasticity leads to inaccurate confidence intervals for parameters ($\beta_0$, .., $\beta_k$). Stock and Watson (2007) observe that heteroskedasticity is very common, and economic theory does not give any reason to trust that errors are homoskedastic. This study uses techniques that are robust to heteroskedasticity, namely Taylor series linearisation (SAS Technical Support, 2009). Here, the Taylor series linearisation method addresses
complex sampling by computing sampling errors with stratum and cluster variables ER31996 and ER31997.

Results

This study features two main models: one with religious voluntarism and another with political voluntarism as continuous dependent variables. Each model features five subsamples. Models for male and female head subsamples are almost identical; the difference is that the model for male heads controls for marriage. However, the models do not capture the same type of head. For example, male heads can be married or unmarried. Models that do not control for variables that may influence voluntarism among married men, such as factors related to the wife, may be omitting important variables. In contrast, by definition, female heads are restricted to unmarried women. In order to make subsamples more comparable, male heads were further restricted to those unmarried in 2003 and 2005.

All models feature the same binomial key independent variable, tenure. All multiple regression models use stratum, cluster, and weight variables during analysis. All models yield small coefficients of determination ($R^2$). Wooldridge cautions against putting too much weight on $R^2$, citing that low values do not indicate violation of the zero conditional mean, or omitted variable bias assumption. Instead, low values may indicate that variables that influence the dependent variable are not present in models (Wooldridge, 2006).

Multiple regression: religious voluntarism

Table 1 presents multiple regression results for models using religious voluntarism as the dependent variable. The symbol (---) indicates that variables were excluded due to irrelevance to model or having insufficient variation for estimations.

Table 1 shows no statistically significant key coefficient for any of the five subsamples. Among the remaining variables, seven are statistically significant. Four variables relate to community size. It seems that community size is associated with an increase in religious voluntarism when communities are small, that is, when the population of the largest city is 10,000-24,999 (size5) for male heads and family (head) (columns one and four). These results are consistent with Putnam, who observed that volunteer behaviour such as formal volunteering and working on community projects are more prevalent in smaller towns (Putnam, 2000). An increase in religious voluntarism occurs for families (head) when communities are midsized, that is, when the largest city population is 50,000-99,999 (size3) (column 4). For families (wife) (column 5), a decrease in religious voluntarism occurs when the largest city in a community has a population between 25,000 and 49,999 (size4).

The other three significant variables relate to the wife’s education and working status (column 5). Employment appears to have a negative impact on religious voluntarism, as wives that may manage a home, family, and career may have less volunteer time. Unemployment also has a negative impact on religious voluntarism. Perhaps unemployed individuals spend time seeking market work, as opposed to volunteering. An increase in education is positively related to religious voluntarism. Increased education may lead to better employment opportunities, which per Putnam (2000) increases the likelihood of volunteering.
Table 1.
Multiple regression, dependent variable: Religious voluntarism

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**Multiple regression, dependent variable: Religious voluntarism**

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**Summary statistics**

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* Significant at α = .1; **Significant at α = .05

Reference categories:
- Male heads (married and unmarried): head_nonlabor_change; size6_change
- Female heads: head_nonlabor_change; size6_change
- Families: head_nonlabor_change; wife_non_labor_change; size6_change
Multiple regression: political voluntarism

Table 2 presents multiple regression results for models using political voluntarism as the dependent variable. The symbol (---) indicates that the variable is not used in modelling either because it was inappropriate given the model or not enough variation was present for estimations.

Table 2.
Multiple regression, dependent variable: Political voluntarism

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Multiple regression, dependent variable: Political voluntarism

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* Significant at α = .1; **Significant at α = .05

Reference categories:
- Male heads (married and unmarried): head_nonlabor_change; size6_change
- Female heads: head_nonlabor_change; size6_change
- Families: head_nonlabor_change; wife_non_labor_change; size6_change

Table 2 shows no statistically significant key coefficient for any of the five subsamples. There are three other statistically significant variables. For male heads (column 1), living in a
A relatively large community is associated with a decrease in political voluntarism. This is somewhat surprising, as larger communities may offer volunteer opportunities. In addition, an additional child in the home is associated with a decrease in political voluntarism. A word of caution is in order; as discussed, this model (column 1) may not hold all else constant. Better models for male subsamples (columns two and four) do not yield significant results. For female heads (column 3), being unemployed is associated with decreased political voluntarism. These women may be too engaged otherwise for political voluntarism.

**Analysis of results based on hypotheses**

Given the data, variables, and techniques used here, the null hypothesis is not rejected. Homeownership has no evident relationship with citizenship as measured by political and religious voluntarism among individuals. The various subsamples feature some statistically significant variables, mostly related to community size.

It is still reasonable to expect that both homeowning and renting consumers derive happiness from religious and political voluntarism, increase human capital via religious and political voluntarism, and establish and strengthen connections between themselves and others through religious and political voluntarism. It may be that religious and political voluntarism and subsequent utility, human capital, and social capital are driven by factors other than homeownership.

**Weaknesses**

**Limited time span of data**

This study uses Panel Study of Income Dynamics (PSID) data from 2003 and 2005 as variables of interest appear in these waves. Little variation in variables leads to imprecise measurements. Having more time periods would allow greater lapse between the first and last periods, and thus increase individual variation necessary for estimation. The 2007 and 2009 waves do not feature voluntarism variables (University of Michigan, 2009a). Future research may use the additional waves to create longer time spans, given inclusion of variables of interest. Alternatively, a different dataset may be used for comparison purposes. The US Census Bureau provides one such panel dataset, the Current Population Survey supplement survey.

**Data and variables**

The variable that intends to measure connectedness, length of residence, may not be sufficient. The PSID variable asks respondents whether or not they moved since January 1 of prior year. Unfortunately, this does not capture rootedness that might accompany different lengths of tenure. For example, all individuals living in their address since January 1 of the prior year would be recorded as did not move. This does not differentiate whether the individual had lived at address for 2 or 20 years. A rooted person would undoubtedly have more time with which to develop connectedness in the community, and theoretically cultivate religious and political voluntarism. Additionally, it is unknown whether the individual moved down the street, across town, or elsewhere. This may affect connectedness, which in turn may affect religious and political voluntarism.
No causality implied

During analysis, the concern is ever present that some variable important to the research question is not present in data. Wooldridge (2006) observes that the possibility always exists that models do not control enough time-varying factors. Before-and-after comparison is a respected tool for omitting unmeasured or unobserved variables that do not change over time, carefully suspending obstacles (Duncan, 1972). Although using this tool is respected, drawing causal conclusions is still problematic. Stock and Watson (2007) define causality to be the effect of an action or treatment on an outcome, measured via a randomised experiment. Here, the treatment is accepted as the cause of change or lack thereof in the outcome. This study does not use data from a controlled randomised experiment. Primarily for this and other reasons, this study makes no claim to causality.

Final observations

Given this dataset and the techniques used here, the assumption that homeowners are better citizens as a result of increased religious and political voluntarism is unfounded. Results overwhelmingly indicate that tenure does not matter. Given that the tenure norm in the United States is homeownership, renting might be seen as a less attractive option than ownership. Those who rent may be perceived to be somehow lesser than those who own. The implication of this study is that individual community participation as measured by religious and political voluntarism is not stifled by renting.

Biography

Assistant Professor and Extension Housing and Consumer Issue Specialist Gina Peek, Ph.D. is with Oklahoma State University, located in Stillwater, Oklahoma, United States. Gina’s faculty appointment is with Oklahoma Extension Service, which works on a variety of problems with a focus of improving the quality of life for all Oklahomans. Gina is also interested in housing policy. Gina is a member of the Housing Education and Research Association (HERA) and the American Association of Family and Consumer Sciences (AAFCS). E-mail: gina.peek@okstate.edu.

References


Notes for Contributors

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Please provide a brief (less than 100 words) paragraph for each author, including current role or memberships and an E-mail address for correspondence. For example:

Professor Donna Pendergast, PhD is Head of School and Dean in the School of Education, Griffith University, Brisbane, Australia. Donna researches and writes about Home Economics philosophy, education and practice. Donna is a member of the IFHE Executive, Chairperson of the IFHE Think Tank Committee, and Editor of the International Journal of Home Economics. She has served as National President of the Home Economics Institute of Australia, and President of the Queensland division. She was Editor of the Journal of the Home Economics Institute of Australia for ten years and serves on several Editorial Boards. E-mail: d.pendergast@griffith.edu.au

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