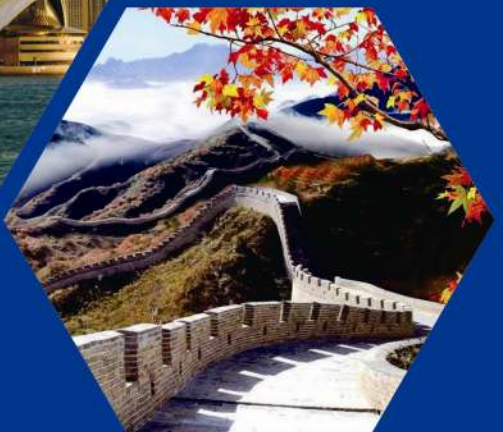


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International Prize Essay for Aussie-Sino Studies



The Journal of Aussie-Sino Studies (JASS) is a multi-discipline, peer-reviewed, open-access, comprehensive international journal (ISSN: 2204-6135; AN: 54116474), which has been approved by the National Library of Australia, and published by the Sino-Aussie Unique Cooperation Centre for Educational Study and Service, Australia. We aim to build a Bridge of Understanding and Cooperation (based on sharing knowledge) between North and South.

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Contents

<p>Relating Agro-Ecology to Social Resilience of Rural Smallholder Farmers <i>Rose Anarfiwaah Oppong Michael Addaney</i></p>	1
<p>Obligation to Posterity and African Environmental Intuitionism <i>Otto Dennis, Ph.D.</i></p>	11
<p>Why is the low-carbon leisure life possible? <i>Chen Changli</i></p>	16
<p>A Study On Cognitive Experiential State And Its Impact On Outcome Behaviour In E- Retailing In India <i>Ebenezer Paul Rajan.T.Y Dr.A.Varadaraj</i></p>	20
<p>The Comparison of Phrases with the Word “Hao” between Chinese and English Language <i>Chen Jianwen</i></p>	26
<p>“Happy Life” in Postmodern Consumer Society:A Thematic Study on Cheever’s Short Stories from a Baudrillardian Dimension <i>Guo Wei</i></p>	29
<p>China’s Economic Image Construction: A Content Analysis of News Coverage in Wall Street Journal (2009-2013) <i>Lei Xiaoyan Zhang Kun</i></p>	36
<p>A Comparative Study on Chinese and Western Architectural Culture From the Perspective of University Humanistic Education <i>Li Gaojun</i></p>	43
<p>A Comparison Between Li Renlao and Tao Yuanming’s Personality Spirit:Based on Returning Home <i>Sun Yaoqing Wang Xiaoxuan</i></p>	47
<p>Textual Research on the Relationship Between Governor of Denglai and Governor of Shandong in the Ming Dynasty <i>Tang Baicheng Li Jinfei</i></p>	51
<p>Is ‘Framing’ Important? Illustrate Framing in News Coverage of Social Issues <i>Wei Wei</i></p>	57
<p>Quality Teaching: Different Teacher Beliefs in Classroom Engagement <i>Hu Zhixing</i></p>	60
<p>When the Family is at Risk, Where is Societal Cohesion? <i>Jim Ijenwa Unah</i></p>	66
<p>On Application of BIM to the Project of Comprehensive Improvement in the Demonstration Part of Luohe River and its River System <i>Fu Xiangcai Yang Xiangui Qinlin Cui Xiaolei</i></p>	74
<p>On Double-front-axle Linkage Suspension Dynamics Simulation of a Truck <i>Shen Jian Chen Yuxiang</i></p>	78
<p>Limited Proteolysis: Evaluating the Degree of Hydrolysis of Protein Hydrolysates from <i>Vigna subterranea</i> and <i>Cajanus cajan</i> <i>Amponsah A S Kumasi-Ghana Ofosu I W</i></p>	83

Relating Agro-Ecology to Social Resilience of Rural Smallholder Farmers

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Abstract: Agro-ecology is often proposed as a solution towards sustainable agriculture because it encourages crop diversification and supports soil health, thereby creating a resilient and stable agro-ecosystem. Although farmers face challenges such as drought, pest and crop diseases attack, they somehow manage to sustainably produce food in order to remain resilient. This study therefore reviewed literature on agro-ecology and social resilience, to find how the application of agro-ecological methods relates to the social resilience of rural smallholder farmers. Topic-related keywords and phrases were used for selecting literature and empirical case studies conducted in rural areas of developing countries. The study observed that the application of agro-ecological methods can be influenced by the social resilience determinants. It concludes that further research and the participation of various stakeholders within the society especially women ought to be promoted to help build collective knowledge capacities for the resilience of the society through agro-ecological practices.

Key words: Agro-ecological; social resilience; smallholder farmers; society; ecological resilience

Introduction

The global challenges in food prices, environmental degradation problems and improving human well-being have motivated a global consensus on the need to re-think and make some urgent changes in the current agricultural and food systems (Berazneva & Lee, 2013). Systems that rely mostly on renewable energy with closed nutrient cycles as well as support the health of the environment and cater for the inefficiencies associated with production are recommended (Gregory & Ingram, 2000). These systems are proposed to have characteristics that enable them mimic the natural ecosystem to support food production in a sustainable environment. This is where agro-ecology has great appeal since it responds to most of the concerns raised about the current production systems such as industrial monoculture systems (Amekawa et al., 2010).

Agro-ecology has been acknowledged to be the science of sustainable agriculture (Altieri et al., 1995). Agriculture is estimated as a source of livelihood for about 86% of rural people in developing countries. It is source of employment to smallholder (Egoh et al., 2012). Mostly subsistence farming is practised by applying low-resource input approaches on poor and small pieces of land prone to shocks and stress including droughts, pests and diseases with little or no mechanisation for the production of food (Altieri, 2002). Agriculture can lose its relevance as a source of livelihood in rural areas in the midst of these challenges, thereby compelling rural dwellers to seek off-farm avenues in urban areas (Amekawa et al., 2010).

In contingent situations, farming communities tend to adopt old practices which have been tagged *agroecological* (Folke, 2006). This

gives an implication of the relationship between socio-economic situations and agroecology, therefore an interdisciplinary approach on agroecology and social issues affecting the application of agroecological methods is required (Gregory & Ingram, 2000). Studies done in this regard are mostly limited to understanding how humans respond to changes in the environment, economics and society. However little has been done on what capabilities farmers have to enable them cope with challenges and if these are as a result of them using agroecological techniques to make them socially resilient (Wilson, 2013). This study therefore sought to find how agroecology relates to the social resilience of rural smallholder farmers.

The following section details the methodology, and then the analysis is presented. The results are then presented. Finally, the resilience of rural smallholder farmers to socio-economic determinants of agro-ecology is detailed.

Methodology

The study was conducted through the review of existing scientific literature including journals, book chapters, reports and conference proceedings. These materials were sourced from Scopus and Google Scholar databases. This method has been used by Wezel & Soldat (2009) to find the qualitative as well as quantitative historical analysis of agroecology. Kennedy (2007) observes that this method integrates a wide array of scholarly literature including empirical or non-empirical, conceptual as well as theoretical in order to tackle specific situations. It helps to discover existing knowledge gaps, identify linkages and relationships between existing literatures and narrows the gap between knowledge and myths (Booth et al., 2012).

The study began with a broader search on 'agroecology' and 'resilience' separately. The term *agro-ecology* was also used for the initial search but results obtained were much less as compared to *agroecology*. A search for *agroecology* yielded about 1450 documents; *agro-ecology* yielded 340 on Scopus search engine. Therefore, the most used word in literature, *agroecology* was chosen in order to gather much information for the study. There was however few cases that even though 'agroecology' was used in the search, results produced relevant data in articles with 'agro-ecology' titles which were reviewed. Other terms and phrases such as 'agroecological practices', 'resilience', 'social resilience', 'social factors in agroecology', and 'agroecology and resilience' were also used in a broader search to have an idea what existed in literature on the topic.

In order to determine the relationship between agroecology and social resilience, phrases such as 'impacts of agroecology on social resilience' and 'impacts of social resilience on agroecology' were used to analyse the influence of both on the application of agroecology methods by smallholder rural farmers. Empirical case studies on agroecological practices that brought to light aspects of social resilience were helpful to understand the relationships. The search was however limited to the disciplines of agricultural science, environment/ecology and social science. This is because agroecology is about food production (agricultural science), ecosystem sustainability (environment/ecology) and human well-being (social science). The choice of limitations was based on the main goal of the study in order to refine literature search.

Discussion and results

Agroecology emerged in the late 1920 when Bensen, a Russian agronomist, first used it in his two scientific publications (Bensen 1928, 1930). The publications described the use of ecological methods in research on commercial crop plants to find out which ecological conditions best support the growth of these plants. This study served as a guide for further publications by Klages (1942) as well as similar studies (Wezel et al., 2009; Wezel & Soldat, 2009).

Agroecology began to play great role, serving as a basis for the sustainability in agriculture. Sustainability in essence became an objective in the studies of agroecology. A publication compiled from different authors by Douglass (1984) on the ecological basis of sustainability helped strengthen the bond that has been established between sustainable agriculture promotion and agroecology research. Currently, agroecology represents the application of ecological approaches to agriculture and on another hand, be the call for social and ecological shift. Implying that agroecology has evolved from a sole focus on ecology in agriculture in the late 1920s through sustainable agriculture and currently to socio-economic issues in agroecology as well as the scaling-up of agroecology within farming systems. The core principles of agroecology found in Altieri (1995) are graphically presented below in figure 1.

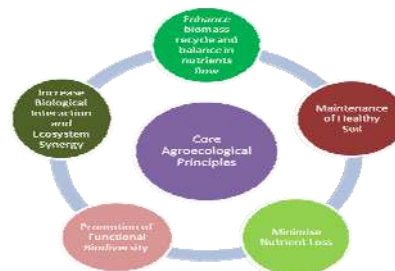


Figure 1. Core agroecological principles (Altieri, 1995)

Carlson et al. (2012) asserts that resilience is 'the ability of an entity including asset, organization, community and region to anticipate, resist, absorb, respond to, adapt to, and recover from a disturbance'. These definition seem to assume that actions taken prior to the occurrence of the adverse event; usually associated with resistance and anticipation are not really considered as determinants of resilience. In the shift from the stability to resilience, the characteristics that boost the persistability of the ecosystem and enabled the system to survive despite the instabilities or disturbances were the basis. This implies that the resilience concept had a precise emphasis on ecosystems and hence did not involve social scientists in resilience discussions (Keck & Sakdapolrak, 2013).

Social resilience was conceived from the initial concept of resilience that laid much emphasis on the persistence of the ecosystem through its evolution to focus on adaptability and currently addressing issues of society transformation in the current realm of global change (Keck & Sakdapolrak, 2013). The first definition of social resilience *as the ability of communities to withstand external shocks to their social infrastructure* was proposed by (Adger, 2000). Different from the initial concept of resilience, the explanation of this definition emphasized on the abilities available to social entities to enable them to survive despite the occurrence of disasters.

Determinants of resilience capacities of rural smallholder farmers

In rural social systems, ecosystems and humans are inseparable such that survival of each depends on the other. Hence everyday changes in societies including external shocks such as environmental hazards as well as internal challenges such as policy changes by governments could de-stabilize the social systems. Therefore societies need to be able to hold the line against these crises and persevere in order to survive (Chapin et al., 2010).

Social resilience of rural smallholder farmers therefore expands the ecological meaning of resilience to acknowledge that rural people have the capacity to organise themselves by taking the institutional, social and economic factors of the community into account within farming systems (Maguire & Cartwright, 2008). This reveals the resilience capacities of a rural community. In this context, the response of rural smallholder farmers to a disturbance can lead to a new sustainable state rather than a come-back to the former state.

An agriculturally-based rural community for example may develop different economic activities such as improved farming practices that better suit the current environment in the face of reduced food production and poor environmental conditions. Rural farmers therefore ought to intentionally integrate lessons from past experiences into social and physical environment interactions (Severi et al., 2012).

However, the desire to increase crop production in order to boost resilience in some cases push farmers to adopt practices that are foreign which in the long run could make them vulnerable to agricultural-related shocks and stress such as droughts, pests and diseases. This leads to a decline in crop production and degradation of land quality as well as quantity needed for food production (CTA, 2013). Moreover, such challenges often affect the resilience of farmers by making communities vulnerable to other socio-economic vices such as ill-health and poverty which in turn take a toll on agricultural productivity. In some cases, rural communities dependent on indigenous agroecological practices begin to lose these practices such that the future generation have no idea about these practices which existed (Okello et al., 2009).

Different communities respond differently to a particular disturbance. This might be related to the impacts of the disturbance being different within communities, therefore requiring different responses or approaches. Individuals' self-capacities and institutional factors play a role in the level of impacts caused as well as determining the trajectory of change (Herreria et al., 2006). These changes could have significant social consequences and therefore the importance of acknowledging these changes with their consequences should not be undermined. The surrounding environmental, political, economic, cultural and social factors need to be taken into account in addressing the changes (CTA, 2013). The factors that determine the resilience of smallholder farmers within a society are basically access to resources available which are influenced by social structures. These determine the diversity and innovativeness of the economy and improve capacities - coping, adaptive and transformative (Berkes & Ross, 2013; Keck & Sakdapolrak, 2013). The response of smallholder farmers in rural communities to these changes will depend on their self-abilities influenced in turn by their resources, institutions and actors within the society (CTA, 2013).

Resource availability and access

Access to available resources is always imminent for enhancing resilience. Abilities or capacities needed to cope or adapt to changing situations are influenced by access to resources that are available (Tompkins & Adger, 2004). The ability of rural communities to adaptively respond to changes by using available resources instead of foreign interpositions to improve their resilience is reflected in social resilience (Maguire & Cartwright 2008). The resources could be natural, financial, social, as well as human and economic.

Agricultural land, forests and rivers are examples of the many available natural resources that help in social resilience and access to

as well as efficient management of these resources determine the resilience of rural smallholder farmers by sustaining income generation (Nawrotzki et al., 2012). For example, large agricultural lands cleared for mono-cropping of cash crops might negatively affect the texture and fertility of soil through erosion. Therefore leading to a reduction in biodiversity as species of seed or crops begin to get extinct, hence destroying the ecosystem synergy and interactions (Woodley et al., 2006). Financial resources refer to the availability of cash either through income gain, savings, credit supply or remittances that support the application of farming methods whilst human resources refer to active human labour, skills and knowledge that is fundamental to the well-being of a society (Nawrotzki et al., 2012).

Cultural norms and values affect the human resources especially in the sense of stewardship as well as transmission of local knowledge and skills within generations. Land and resources management, preservation, biodiversity protection with diverse food production are examples of local factors that need the knowledge and skills from generation to generation for their existence. These can be attained and secured through active synergy daily with the environment as well as cultural ceremonies such as traditional festivals (Woodley et al., 2006). Culture plays an important role in the resilience of rural farmers. Cultural identities reveal the perceptions, beliefs and knowledge that enhance the building of resilience. These also determine the ability of rural farmers to cope, adapt and transform to certain strategies because the ways rural farmers respond to disturbances are mostly influenced by culture. Therefore current studies on social resilience highlight its role and bring it to the forefront (Schwarz et al., 2011; Furedi, 2007).

Conducted research in rural areas on agroecological practices proved that biodiversity is kept in existence due to some cultural practices like festivals and the knowledge that comes with it. Therefore, maintaining such cultures might be an assurance of agro-biodiversity continuance which could give agroecology a boost in rural areas (Woodley et al., 2006). A research conducted in Somalia showed that in agroforestry systems, different trees and crops grown were of cultural significance in terms of births, marriages as well as deaths. At the birth of a child for instance, a type of herb cultivated in agroforestry is put on the umbilical cord for the first week and the mother wears an earring of garlic gloves. Therefore the production of such herbs and garlic is necessary to the people (Hussein et al., 1996 in Amekawa et al., 2010).

Social resources are the networks and groups available in the society. Membership to social groups and networks enhance resilience through trust built in relationships. This encourages individuals to share experiences, adaptation and coping strategies (Nawrotzki et al., 2012). In situations of social as well as economic stress within rural areas, farmers rely on access to available resources to enable them deal and cope with the associated challenges. This is to ensure that income sources are maintained. This secures access to food and availability of food in order to be

resilient (Adger, 2000; Abesamis et al., 2006).

Rural farmers' resilience questions power, equity and justice in relation to access to available resources. In this context, the importance of institutions in areas of gender, kinship or ethnic roles are relevant because they form the cultural capital of people in gaining access to available resources such as land and water for food production (Obrist et al., 2010).

Impacts of socio-economic determinants of agroecology on social resilience

Local knowledge describes the interpretation of users of a resource within the agroecosystem and the developed strategies as well as techniques that enable them to deal with the changes in the agroecosystem (Berkes et al. 2002; Olsson & Folke 2001). Moreover, gained knowledge and experience from past events affect the decisions made by rural smallholder farmers because they tend to blend many local determinants such as weather conditions and soil type into food production. Rural farmers do not engage in farm practices that would negatively affect household food availability or food security on a whole. Therefore strategies that have proven to be financially, socially and culturally beneficial might be adopted and practised (Stocking, 2003).

Results from a research conducted in Tanzania to explore how smallholder farmers dealt with changes and uncertainty with local knowledge in farm management practices by Tengo & Belfrage (2004), proved that local knowledge helps to increase the resilience of the farmers. The traditional system of poly-culture where maize is intercropped with beans and combined with pumpkins exists in rural Tanzania. Sometimes non-cultivated plants such as *Commelina* sp. were used to serve as primary producers or as mulch to buffer changes in climate as well as serve as vegetables and medicinal plants. Hoeing an old practice that requires local knowledge expertise was used to as a mechanism to control weed growth, thereby needing extra labour and hence creating employment. Production increased whilst diversification in crops decreased risk of crop failure in times of drought and diseases resulting in more income. Household food supply increased as well. By these, the farmers were able control erosion, weed, pest and temporal droughts whilst maintaining soil nutrients and health as well as sustaining income and well-being.

Impacts of labour

Agroecology is known to be labour intensive due to its low or no use of mechanical inputs in its operations. Labour skills in agroecology therefore can promote the efficient use of available human resources due to low reliance on external inputs to increase yields (Tittonell et al., 2012). A study by Limnirankul (2001) in Chiang Mai Valley of Thailand indicated that mixed cropping, a labour-intensive practice of soybean cultivated with rice resulted in an average yield of 1.25 t/ha. Moreover, the yield of rice was maintained at 2.8-3.0 t/ha without the use of chemical fertilizer but through hired labour. Further, intercropping of leguminous crop

Sebania rostrata, a biologically nitrogen fixing crop with rice, resulted in rice yield increase of over 20%.

Experiments conducted in Burkina Faso by Zougmore et al. (2003) on stone mulching, a labour-intensive practice in the field indicated a double increase in yield and biomass of sorghum within plots that had stone lines when compared to those without stone lines. Another study of tied-ridges applications in Zimbabwe by Motsi et al. (2004) resulted in yield doubling as per those without ridges. Furthermore, in Ethiopia the adaptation of traditional *maresha* ploughing practices in semi arid areas showed a yield increase of 13% to 19% in *teff*, a staple grain-food (Deressa, 2007).

Most agroecological practices require labour in order to be sustainable, thereby creating employment for income gain by rural dwellers. Increase in yield due to accessed labour means farmers can diversify farm systems by incorporating different crop species or accessing more land for crop production. This could also serve as a platform to move from subsistence into commercial agroecological farming requiring more labour for more income gain and as a source of employment to reduce if not prevent outmigration in rural farming areas (Limnirankul, 2001; Dile et al., 2013).

Impacts of gender relations

Women farmers have been known to be selective of certain crops and technologies. Concerns for quantity as well as quality in terms of production make women intercrop with diverse native crops on their farms (Amekawa et al., 2010). Laboratory-based research conducted in Mexico indicated that varieties of corn selected by women engaged in *milpa*- an intercrop of corn, beans and squash were more resistant to local weather challenges, nutritious and were bound to give higher yields than those selected by men (Amekawa et al., 2010). Such inherent abilities and experiences of women help promote the availability of local resources. Moreover, women have been observed to be natural *guardians* or *keepers* of indigenous agroecological knowledge in maintaining biodiversity and preserving less-used crop species. Furthermore, they could transfer such knowledge to future generations to make societies resilient mainly because they have the flair to inculcate these knowledge and skills in the young through enculturation (Amekawa et al., 2010; Mata & Sasvari, 2009; Colfer & Minarchek, 2013).

In most rural areas, there are specific crops that are managed either by men, women or the old (Rosset et al., 2011). Traditional poly-culture systems with sheep production are common in rural Morocco, due to high density in population and limited irrigation. The main forage used is *Alfalfa* which is managed by women as they are in charge of forage production on farms. The men in turn manage the sheep and on-farm production of cash crops. Therefore to ensure the improvement in forage production, both men and women need to be actively involved. The women need to conserve landraces of alfalfa whilst the men have to efficiently use water to ensure conservation of water resources, biodiversity as well enhance their resilience to drought (Bouizgaren, 1999). Moreover in Bangladesh,

women practising agroecological strategies such as integrated pest management systems produced and marketed rice of high quality resulting in more income gain. They then could have access to other resources including land and fish ponds in order to diversify farming systems by adding either fish farming or vegetable production to the production of rice to ensure household food security at all times in spite of crisis (ActionAid, 2011).

In situations where special programs are being incorporated in farming systems for women, they gain access to empowerment through education as well as capacity building. Moreover, networking of women farmers' groups create an avenue for knowledge sharing of gained experience. Access to diverse markets in order to gain income from selling of produce is also promoted within such groups (Lemke et al., 2012). Moreover women when given access to natural resources become empowered to practise more agroecological strategies and encourage men to do same through evidence of yielded results of increased productivity and income (Valdivia & Gilles, 2001).

Impacts of resource availability and access

Within societies, the resources available and their accessibility influence the farm management practices of farmers. Resources available in rural agricultural areas are mainly *natural* (land, soil, water), *human* (for knowledge, labour and skills), *financial* (from families, friends, loan institutions) and social for transmission of knowledge on natural resources and capacity building (Masvaya et al., 2009). Access to resources such as arable land; water and shared-knowledge enable farmers to cultivate crops for their household food security. Rural farmers learn and gain experience through trials on farm-lands in order to enable them adapt to situations that affect farm systems. For example, access to unhealthy soils might not permit the cultivation of some crops such as maize, thereby leading to frequent yield loss. However, the farmer could try mulch application or intercrop maize with beans (based on friends' experiences or suggestions from network group) so that the land regains its health and fertility whilst maintaining the needed nutrients like nitrogen. This attempt might result in high yields of both maize and beans or other attempts made if the initial one failed until success is attained (Jain, 2012).

Before the Cuban revolution, most farmers in Cuba were into high mechanization farming systems using tractors as well as fertilizers imported from the United States of America (USA) for the production of sugarcane for export. Since about 30% of arable land was used for the singular production of sugarcane, the people relied mostly on imported food. However, after the European social bloc, USA secured its trade embargo leading to unavailability of food in Cuba due to the importation of inadequate food as well as machinery and farm inputs. With soil degradation as remnants from mechanisation setting in and pesticide invasion, yields of staples including rice were affected. Cubans therefore were faced with economic and food crisis, thereby compelling farmers to adopt low

external-input agroecological farming practices (Rosset et al., 2011; Altieri et al., 2011).

Report from FAO (2012) indicated that food production increased to an average of 4.1% annually from 1995-2004 (an increase by 37%) in Cuba. The techniques of agroecology practised have shown splendid outcomes in Cuba mainly due to the resources available which were accessed when the crisis occurred (McKay, 2012). The resources available in Cuba that were accessed included the natural (e.g., land, viable local seeds), human (e.g., skills, knowledge, will-power), social (e.g. friends, community networks), financial (e.g., access to soft loans and credit) and physical (e.g. renewable energy) that helped in adopting and practising of agroecological strategies (Ellis, 2000). This case is a proof of the relevance of resources availability and access to deal and cope with crisis even with the least resources available through agroecological practices.

Resilience of rural farmers are therefore influenced by the resources available and farmers ability to access, acquire, control and manage them in order to give a productive outcome which in turn influence application of agroecological methods (Valdivia & Gilles, 2001).

Impacts of institutions

Institutions serve as avenues for developing and implementing policies by being decision-making structures. They can therefore influence application of agroecological methods by the power to make or regulate norms and rules (Amekawa, 2011; Moench, 2014). In Alentejo of Southern Portugal, as part of a drought management policy, a water dam was constructed to decrease the risk associated with frequent droughts in the region. Moreover with the European Union policy on production-support subsidies on grapes and olives, farmers engaged more in the production of the water-demanding crops; olives and grapes with access to the dam as an irrigation support. This could lead to drought risks in the long term though there is a short term improvement in their economic situations (Mánez Costa et al., 2011). Policies like these raise various complex issues in the society resulting in resilience compromises including reducing biodiversity and loss of local species. Smallholder farmers' access to resources and market in the long term can be inhibited by such policies especially when the policies are withdrawn (Kherallah et al., 2002).

Some policies promote the application of agroecological practices. A study conducted by Mahanta & Das (2012) at Assam in India established the relationship between resource degradation and labour loss through migration. Farmers had to leave to seek livelihood alternatives in urban areas due to land quality loss and deforestation. However, water and soil conservation techniques as well as policies of afforestation helped to reduce rate of urban migration. Therefore, Assam had enough human capital to indulge in labour-required agroecological methods as stocks of environmental resources increased. Institutional implemented policies could

encourage the application of agroecological farming practices to increase the production and availability of food as well as enhance the resilience of the agroecosystem (Ellis, 2000; McKay, 2012).

Moreover in most African countries local network groups serve as locales for helping the marginalized in the society most especially women farmers. Members learn to share risk, local agroecological knowledge and relevant information needed for application of agroecological methods. Further, members are supported to expand their on-farm livelihoods through shared knowledge and access to resources such as land, seeds, extension services and credits facilities (Altieri et al., 2011; Bernier & Meinzen-Dick, 2014). This therefore enables capacity building and empowerment for agroecological practices (Dile et al., 2013). Furthermore, local groups assume the responsibility of disseminating information on new policies related to agroecological practices to members. This promotes the relationships of network groups with higher power authorities and can therefore influence policies made on agroecology as well as their adoption in societies (Di Gregorio et al., 2012).

Agroecological strategies or policies that are developed, accepted, validated and recommended by institutions such as government, local groups and research institutes are what the people in the society mostly put into practise, thereby explaining the importance of institutions in adopting and applying agroecological methods on farming systems (Habiba et al., 2014).

Impacts of diversity in actors

One way to enhance social resilience is diversification in knowledge, skills and resources which is usually observed in both the diversity in individuals as well as those in authorities. This is important to establish a connection of the past to the present and with the future in the development of policies or frameworks (Abesamis et al., 2006).

Different understandings and perspectives of the agroecosystem can help determine which agroecological strategy would benefit the society as a whole through deliberations and discourse. For example, rural farmers have a close grasp on their environment and this cannot be equated to the postulated know-how of ecologists. Similarly, the intense training of ecologists cannot be equated to knowledge gained by farmers through experience. There is therefore the need to merge these *school of thoughts* so that farmers with their local knowledge can engage as well as get involved in programmes designed for the progress of the society which integrates local and outside ideas more especially that relating to farming strategies and livelihoods (Altieri, 2004; Altieri & Nicholls, 2012).

More studies on the impacts of societal diversification of actors including farmers, researchers and government on agroecology indicated a success in increasing social resilience as well as agroecosystem resilience through the application of agroecological methods. In Ethiopia, the success of a project implemented by the Institute for Sustainable Development on the application of agroecological practices was possible because of the participation of

all actors in the project. Farmers were offered varieties of practices by researchers and they had the free-will to adopt practices that were convenient for their ecological as well as social setting. Observations made included increased productivity in crop yield, soil health maintenance and reclamation of wasted lands. With these impressive results, the project was up-scaled in a UNDP-supported project (Van Walsum et al., 2014; Belay & Edwards, 2003).

In a similar situation in Brazil, farmers' local knowledge on seed selection and varieties were scientifically acknowledged when a conflict emerged on the use of either local or conventional seed varieties in farming systems. Based on this dispute, government as well as farmers and researchers got together to measure the differences in yield performance of the two varieties using the indicators such as grain quality and the efficacy when intercropped with other crops. The experiments lasted for three years after which the results showed that conventional varieties only produced better yields in very fertile soils with a great deal of rainfall which is uncommon to farmers in rural areas. The local varieties however proved to be much better as they yielded more biomass which could be used as animal feed and though they were stored in absence of pesticides, they however performed better with least pests' attack (Van Walsum et al., 2014).

Moreover in a broad context, different individuals in a society have different characteristics with food preferences as well. These can as well promote the application of agroecology methods as diverse crops would need to be produced to meet the various demands. In this regard, crops need to be inter-planted or mixed as enough arable land might not be available to separately cultivate every demanded crop (Altieri, 1995). Other benefits from crop diversification as a result of different consumer preferences include minimising risk associated with droughts and pest outbreak as well as increase the varieties of food types available in markets (McCord et al., 2015).

Relevance of agroecology for rural smallholder farmers' social resilience

In the search for a deeper understanding on the linkage between agroecology and social resilience of rural farmers, effects of different agroecological cropping systems on livelihoods and how the social status of individuals affect the decisions and choices made are assessed.

Farmers' skills and abilities gained from experience as well engaging in indigenous farm knowledge practices are encouraged and put to productive use in agroecology. Such agroecological practices increase their self-reliance and capacities in times of crisis. Environmental quality, interdependence of plant and animal production as well as social acceptability with economic gains are what agroecological practices seem to stand for based on results from recent studies to promote agroecology (Kumaraswamy, 2012). Moreover challenges in terms of ecological (such as nutrients,

farm-inputs, energy and environmental impacts), economic (such as income, production costs, employment opportunities) and social (such as local-based knowledge) could be addressed with agroecological practices (Iraizoz et al., 2007).

In rural areas, agroecology as a farming system serves as a source of employment and therefore important in developing rural economies. About 70% of people in rural areas earn their income from on-farm activities (Dile et al., 2013). This signifies the contribution of agroecology to poverty reduction within the rural majority. With the increase in yield productivity due to agroecological practices, incomes of smallholder farmers are increased thus indicating a reduction in people who are absolutely poor in rural areas (Dile et al., 2013). Moreover, aside ensuring rural employment, agroecological practices reduce probabilities of harvest failures, increase farm income as well as serve as a reason for social networking and also ensure food security in rural areas.

Conclusion and recommendations

The quest to produce food sustainably without degrading the environment or ecosystem promotes agroecology as a farming system, that responds to most if not all the inefficiencies associated with the recent agricultural and food systems. Agroecology is practised mostly in rural areas by smallholder farmers on farm lands prone to challenges such as droughts, diseases and pests. However, little attention is being paid to the socio-economic determinants of agroecology that enable farmers to cope with these challenges. This study therefore sought to ascertain if agroecology can be related to the capabilities that enable rural smallholder farmers to be resilient.

From this study conducted through an in-depth review of existing literature, the socio-economic determinants (i.e. local knowledge, gender relations, labour) influence agroecological practices which are guided by agroecological principles. Local knowledge serves to be the building block of most agroecological practices. The practices in return promote or support the existence of the core principles which increase productivity in a resilient agroecosystem.

Moreover, agroecological practices vary and cannot be a prescription to the same crisis. For example, an agroecological solution to drought in a society cannot be the same for drought in another. Various agroecological practices are therefore available and suit many different geographic as well as case contexts. However, the social and cultural settings of the geographic location can affect the types of strategies to be adopted and practised. Further the adoption of agroecology is minimal, because the social processes that could support and encourage the adoption agroecological methods through empirical studies seem to be less than those that support industrial agriculture with monoculture (Rosset et al., 2011).

The determinants of social resilience (i.e. resources, institutions, diversity in actors) influence the well-being of rural smallholder farmers. They can determine source of employment, empowerment and income gain amongst others. Moreover, the socio-economic determinants of agroecology inter-relate with determinants of social resilience. Access to available resources, policies developed by institutions and diverse actors within rural areas influence the application of agroecological practices. Similarly local knowledge, gender relations and labour influence the application of agroecological methods.

Agroecology promotes the social resilience of rural smallholder farmers. Agroecosystem resilience also increases as farmers become more resilient by engaging in more agroecological practices. Increase in income gain means expanding farm sizes and requiring more labour for agroecological techniques. Integration of crop varieties on different farmland would encourage and support knowledge sharing as well as skills of all societal actors including women and the aged. Therefore, addressing the socio-economic determinants of agroecology and promoting agroecology in rural areas would help increase the resilience of rural smallholder farmers. Moreover with the various dimensions and interpretations, the question of which farm practices indeed can be termed agroecological ought to be answered. This can help give a defined framework of the agroecology concept.

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Obligation to Posterity and African Environmental Intuitionism

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Abstract: In contemporary philosophy, concern for environmental and general existential sustainability has attracted engaging ethical debate. This owes to its conventional perception as a universal, objective or absolute requirement of justice, where living people are expected to obligate life's vital resources to posterity on intergenerational basis due to some statutory expectation of them to do so. The obligation often assumes either a deontological or consequentialist understanding of the morality. However, because the posterity and world environment concerned consists more of remote future people than immediate world, their factual non-existence presents a fundamental difficulty in actualising the responsibility. There is problem of non-connection between future world and obligers due to time-gap. Treating the morality as an objective norm is considered to be insufficient in motivating the conduct. This is because individuals are not accorded the personal or subjective inspiration required to urge the obligation fundamentally. Urging the obligation (and sustainability), therefore, requires a motivation assumption that is more elemental and subjective in approach. This essay is stimulated by this requirement. And it articulates African ethical intuitionism as the mode of moral living that would sufficiently motivate the obligation through subjective interrelation with the future and environment.

Key words: Ethics of posterity, sustainability, African intuitionism, western rationality, ethical intuitionism

Introduction

Today, in philosophy, a new exigent and engaging ethical question has emerged. This is the question of our moral obligation to posterity – the discourse about acting or behaving with the utmost mindfulness of interests and well-being of our future world. Today, with advancement in science and technology, our knowledge about the environment – i.e. the physical surroundings that we live, work, develop, *et cetera* ...and contemplate life (the ecosystem) (OTD, 1998) – has broadened. We are more enlightened about its prospects and problems. And the problems are particularly distressing. Individuals, businesses and governments engage in decisions, actions and policies that hold portentous future implications for the ecosphere. There are, for instance, nuclear engineering, with its concomitant problem of waste disposal; destruction of wild areas and the extinction of wild species through steady deforestation; permanent alteration of the atmosphere and the oceans through industrialization; depletion of non renewable resources, and continuation of unregulated population growth, *et cetera*, (Partridge, 1998: 82). If unchecked; if we do not restrain ourselves from living out the “surplus exercise of rights” that such attitude to life (Callahan, 1971: 279) and other despoiling tendencies can offer, further survival of human species could either be hampered or future world will be populated with physical and moral misfits. In other words, we threaten sustainability of life.

Yet, since no normal person would endorse such final conditions of life, it has become imperative for living people to consider it as duty, responsibility or obligation to deliberately care

for the well being of posterity in all our decisions, actions and policies. This is because that forms the attitude that would sustain life. People are counselled to live in such a way that they do not leave the world in any worse form than they met it. They are to create opportunities that would normally aid the development and sustenance of life than retard or destroy it. They are to institute the thought of posterity-in-all-actions as a social consciousness, culture and tradition (CUN, 2010). These herald the thrusts of a new science of morality known as ethics of posterity.

From this outset, ethics denotes Greek *ethos* or *ethikos*, which translates to Latin *moralis* (as first used by the Roman: Cicero) and English *moral* that eventually means “habit” or “custom” “manners”, “ways of acting”, and “laws” (Mautner, 2000). Etymologically, ethics entails a habitual or customary manner of acting. Technically, it is concerned with “...the goodness or evil of human actions, and human institutions insofar as this can be ascertained by reason” (Garret, 1968: 2). It is “a normative science of human conduct” (Omogbe, 1993: 4). And its relevance to human individuals is to help them achieve internal (self) and external (social) harmony, happiness and fulfilment – as intended by their being (Ibid). Although traditionally considered as abstract, imprecise yet-to-be-born future people that are literally not expected to share common life with present world (Golding, 1972), “posterity,” on the other hand, *denotes all human descendants and their world, especially from fifth generation until the last survivor on earth.*

Ethics of posterity, especially as discussed in this essay, is a *normative* study, which establishes “obligation to future people” (hereafter referred to as the obligation) as a standard of morality. It prescribes acting for future generations and their world as a superior

way of living and condemns the opposite mode of living, where the well-being of posterity is neglected, as an inferior way of living. With ethics of posterity, people consider effect of all their decisions, actions and policies on the well-being of future world. This is because the well-being of posterity ought to be one of the fundamental goals of human life, and achieving it awards fulfilment, happiness and peace. It also aids organisation and reorganisation of the world, making it a much more conducive place for people to live.

Traditionally, ethics of posterity largely concerns itself with the need to preserve the environment and other natural resources for reasons of intergenerational justice (here after referred to as IJ). It holds that “all members of each generation of human beings, as a species, inherit a natural and cultural patrimony from past generations, both as beneficiaries and as custodians under the duty to pass on this heritage to future generations ... in no worse condition than it was received from past generations” (CUN, 2010: 1). Given this understanding, the morality is generally considered to be a universal and unequivocal norm (Weiss, 1984). This is because, according to Professor Edith Weiss, it is established and supported by ethical (moral rationality) and religious moral principles as well as various international instruments of justice such as Universal Declaration of Human Rights and a host of other conventions and declarations that are concerned with dignity, worth and progress of mankind (Ibid, 544). Weiss further explains that due to its universal normative status, the morality is sometimes seen as an emerging norm of customary international law. This is evident in the treaty-generated custom of the “common heritage of mankind” (Ibid, 544).

From the foregoing, ethics of IJ is, traditionally, a morality stipulated by universal, objective or absolute principles of social, religious and institutional controls. People are expected and urged to live posterity-friendly lives because the conduct is socially, religiously or institutionally held to be a good, right, just and generally acceptable way of living (Rawls, 1971; Partridge, 1976; Martino, 1982; Barry, 1989; De-Shalit, 1995). It also has prospects for moral consequences that are intrinsically valuable (Mulgan, 2006). Ultimately, the ethics is articulated as a sense of morality motivated by objective deontological or consequentialist valuation of human conduct, respectively (Bickham, 1981; Wissenburg, 2010; Beckerman, 2006). Justice or goodness of the conduct consists in acting for posterity from either standpoints – as a moral rule, command, or rule of law (Deadlock, 2012; Ndubuisi and Nathaniel, 2002). And failure to abide accordingly is tantamount to negligence, injustice and defiance.

Now, technically, the foregoing traditional positions on ethics of IJ are referred to as “obligationist” (Ott, 2011). This is simply because they collectively advocate the morality as an obligation. Be that as it is, it is to be observed that in spite of the moral justifications of the obligationist positions, the well being of posterity is still neglected in everyday affairs of living people. Individuals, business and governments still carry on their activities

with utmost mindlessness of the fate of future world. Indeed, whenever people are confronted with the moral exhortation to care for posterity, it is common to find them intuitively expressing disinterest in such requirement. They object strongly to it, opting rather to care for themselves and their immediate descendants than such posterity. This attitude is responsible for the various forms of unsustainable behaviours that inundate contemporary world.

However, the question begged at this juncture is: why the widespread negative attitude toward caring for posterity – despite rich and robust rational, logical, social, religious and institutional justification for the morality? What is responsible for the attitude? And the response to this question is not far-fetched. For, according to findings of this study, a “no-obligationist” temper – which primarily challenges and rejects all obligationist arguments for the morality (on the basis of their theoretical infelicities) – holds that the traditional motivation assumptions are too weak to inspire the morality. Accordingly, for scholars like Callahan (1971), Heilbroner (1981), Thompson (1981), Hardin (1981), Care (1982), Narveson (2011), *et cetera*, who constitute the no-obligationists’ camp, posterity’s existential status presents difficulty in actualising the obligation on the basis of the conventional motivation assumptions. This is because, right from its definition, the sort of posterity concerned by the morality comprises those that are presently non-existent. They belong to atemporal or supratemporal realm of existence. And yet, by conventional (objective) approach to existence, this makes them too empirically and temporally distant, unconnected and, therefore, inaccessible to living persons who ought to be their benefactors. It is that gap, lack of connection or bond that informs the usual withdrawal and unconcern displayed by individuals when they are prompted to be mindful of posterity in their actions. Human beings are often unconcerned about that which they cannot or do not relate with. Merely “commanding” people to undertake the duty based on objective moral injunctions is inadequate in fostering the sort of commitment required for posterity-friendliness. This is because the morality (at this instance) appeals to the people more like a requirement compelled by factors outside their individual (subjective) determination. It is urged by extraneous absolute authority that dispassionately dictates compliance rather than solicit voluntary personal responsibility for it. The challenging question now is: which moral outlook can sufficiently motivate the conduct as a concern that flows from people’s personal relation with posterity and the environment?

This essay focuses on responding to the above question. Accordingly, it reasons that the motivation problem with traditional ethics of IJ is a function of a predominantly Western static-rationalist perception of reality. To resolve the problem, the essay suggests that a more dynamic approach to existence is required. It identifies the dynamic approach with African ontology (which is predominantly spiritual) and goes ahead to resolve the problem within the understanding of existence.

From this outset again, while John Rawls’ view of ethics of IJ

shall represent the general thrust of Western perception of life and the morality, various philosophical views of scholars on African philosophy with respect to personhood and morality represent the African perception.

On Western conception of ethics of intergenerational justice

Generally, Rawls' *A Theory of Justice* (1971) is proclaimed to offer the first systematic articulation of ethics of IJ (Partridge, 1976; 2001: 1; Bickham, 1981: 1; Meyer, 2010: 1). And, for Rawls, justice comprises *those social arrangements* that individuals (who are considered to be rational beings) in an "Original Position" would hypothetically agree to if they did not know what position they would be born into within the society, or in what time period they would live. Evaluating life behind this "veil of ignorance", people are *expected* to negotiate a social contract in which no race, sex, class, or generation is unduly exploited by the remainder of society. Following this chain of reasoning, Rawls (1971: 285-286) concludes that what constitutes *justice is determined by "virtual" contractual processes*, which entails, among other responsibilities obligation to preserve basic democratic processes by following "a just savings principle." Each generation is to set aside a small amount of capital to continually improve opportunities of life for later generations (Cf. Bickham, 1981). This is how care for future generations and the environment is rendered intelligible and practical.

Now, the foregoing chain of reasoning seems to drive intergenerational responsibility on the basis of social agreements, arrangements and expectations, and not personal convictions as such. Man as rational animal is taken to be a being that acts logically (and thus, justly), from thoughtful inferences that are deduced from established orders and rules. Hence, people meet and agree on what should constitute a standard rule of living first (which is "just savings"), then further agree to abide by the rule. The morality is, therefore, engaged not as individuals' spontaneous subjective living but fulfilment of stipulated agreements and arrangements begun by forebears. This is why it becomes a deontological or teleological (or consequentialist) rule of conduct, which people are *expected* to maintain. And, the moral expectation gradually gained such depth of entrenchment in people over time that it turned out to be like individuals' free decisions. Yet, it is not. This is the general trend of thought that underpins traditional ethics IJ.

However, the thinking is fraught with various limitations that are generally considered to challenge the intelligibility and practicality of the morality. Prominent among them is the thinking that logical processes of reason are dispassionate and rigid in epistemic apprehension of reality. Accordingly, subjects and objects of cognition are so disconnected in the process of cognition that both are seen as fixed separate entities. The subject is expected to understudy the object through a rigorous set of analytic rules and from a distance. In such a world, the way people (who are subjects of cognition) relate with the environment and phenomenon of future generations (which are, in this case, their objects of cognition) is

non-mutual. The relationship is as determined by stipulated rules of conduct, for that is what makes it (the conduct) can reasonable, moral and just. Since life makes sense only as it is logically inferred or immediately verified and posterity is temporally absent (and, thus, presently unverifiable), then they (posterity) are considered not to exist. On the basis of the non-existence, it is stipulated that we do not have to obligate to them because we do not know them; we cannot identify them (Parfit, 1976; 1984; Schwartz, 1978; Kavka, 1981); we cannot foretell with precision what their needs are, *et cetera* (see Meyer, 2010). Consequently, concern for sustainable environmental development suffers the sort of human empowerment required to accomplish it. Various environmentally unsustainable practices, therefore, take over the world.

African ethical intuitionism and sustainable environmental development

Ethical intuitionism, it must be clearly stated, is not exclusively African. It is, indeed, one of the general ethical principles, which follows from conventional understanding of moral personhood. According to R. P. Wolff (1977: 12) "each of us has a power of 'moral intuition'." And, "...in choosing a path of action or thought that is most moral, one has only one's intuition to consult. This intuition is then the soul guide after which an agent is to follow" (see Ruzicki, 2010: 50). In this general sense ethical intuitionism holds that we *know* right from wrong actions; what we ought to do from what we ought not to do by intuition prior to any explicit reflection on them, or immediate apprehension of certain qualities that are self-evident (Omogbe, 265-266). But this conventional notion of ethical intuition recommends moral valuation as a type of rationality (Ruzicki, 51). Hence, Western mode of "intuitive rationality," which is the conventional mode of understanding ethical intuition re-institutes rationality (Ibid). Ultimately, therefore, "...the theory seems remarkably absurd (as) it has nothing to offer in the way of compromise between two individuals who possess different intuitions, nor does it provide a practical avenue for reasoning through difficult moral choices" (like the question of obligation to posterity) (Ibid, 51). It is as a result of this limitation with conventional Western understanding of ethical intuition that the slight difference in its African conception appears more apt and rewarding for the purpose at hand. However, before we can articulate what African ethical intuitionism is all about, one important question to address is: Who is an African?

We find that an African is, sociologically, one who originates from the continent of Africa. Accordingly,, Africans broadly include the core northern white Arabic peoples of the continent of Africa, the white immigrant indigenes of the southern Africa, and all other black nations, "the Bushmen, Pygmies, Nilotics, Bantu berbers," (Ruch and Anyanwu, 1981: 180), Yoruba, Igbo, Hausa, Ashanti, Ika, Ibibio, *et cetera*. But in a narrow sense (i.e. a strict perspective, where a philosophy that meaningfully describes a peoples' life is concerned), Africans only include the black peoples of the continent. It is the

Negroes, that the description “African” is accorded.

Philosophically, or better still – metaphysically – an African is a spiritual individual whose personhood is attained through participation in communal life (Menkiti, 1984: 171-181; Ruzicki, 51). Such person holds a basic assumption of spirituality where force – vital force or life-force – is the basic constitutive element of reality. Accordingly, everything is constituted of vital force. Plants, animals, stones, mountains, water, time, the dead (living-dead), the yet-to-be-born, mind (living person) and matter (the physical universe – world environment), *et cetera*, are transcendently fused together in an inseparable interpenetration that keeps them constantly intermingling (Jahn, 1961). Forces exist and interact in an inseparable constant hierarchical mixture where man is at the centre. Man is the dominant force among all created visible forces. And, he knows himself as in the middle of a hierarchy of forces, some acting above and others below him. Outside the hierarchy of forces the human being has no existence (Tempels, 1959: 21). His world is one of extraordinary harmony of forces; of synthetic unity and mutual compatibility among all things (Unah, 2002).

To the African, life is meaningful only in co-existence, collectivism, holism and synthesis. “Negro African Society,” according to Ruch and Anyanwu, “is collectivist, or, more extremely communal” (Ruch and Anyanwu, *Op. Cit.*, 325). This informs J. S. Mbiti’s definition of an African sense of solicitude for persons in the statement: “I am because we are, and since we are, therefore I am” (Mbiti, 1970:141). “...it is the community (i.e. interpenetrating relation with all) that defines a person as a person, not some isolated static quality of rationality, will, or memory” (Menkiti, 172). “...the reality of the communal world takes precedence over the reality of individual life histories, whatever this may be. It is by rooting himself in an ongoing human community that the individual actualizes himself. And this primacy is meant to apply ontologically, but also in regard to epistemic accessibility” (Menkiti, 171).

Now, in consistence with this communal personality, the African arrives at a trustworthy knowledge of reality by intuition and personal experience (Ruch and Anyanwu, *Op. Cit.*, 94) – the instantaneous, direct spiritual apprehension of and communication with all things, without the intervention of reason as such. He lives out knowledge. This is because his behaviour; his life or vital experience is conditioned by his knowledge of the nature and action of forces. And, such knowledge does not permit any clear cut impersonal distinction between epistemic subject and object (in our case, his environment and posterity) along spatial or temporal lines because his mind cannot conceive the world in isolation of himself. The African neither logically analyses things nor does he carry out any rigorous empirical study of an object to know it. He neither doubts the evidence of his senses in the Cartesian fashion, working out formulae that would lead him to knowledge nor does he dispute his intuitive experience. His mind is inseparable from matter and time as he experiences reality in its totality. Vital experience (in all its complexity) is grasped only in totality, through temporal

interpenetration of physical and spiritual forces.

African social order as intimately lived in the communal unit known as family is organized along this ontological plane. There is no purely personal morality in a community of interacting and interpenetrating life-forces. Morality is viewed in terms of fulfilling duties that can increase and strengthen the ontological equilibrium of community, as those that can disrupt the very fabric of the universe are disharmonizing. That universe or community comprising the totality of temporal experience is an intricate fusion of the past and future in the present. The thought of the dead, who are still living forces in the minds of the living (Mbiti, 32) (representing the past) and posterity, who are yet-to-be-born in the mind of the living (representing the future), collectively animate the being of the living person. That thought is one of care, responsibility and duty. Consequently, the living is in constant duty to posterity (just as the dead), to maintain the social and physical environment (among other things). This is possible, first, through the force of blood relationships in the family, then, the force of communal co-existence. And environmental maintenance constitutes the duty to care for all the animate and inanimate components of his social and physical surrounding, with view to sustaining the ontological equilibrium of things. The African would not, for instance, cut down a tree for an opulent aesthetic reason (as done in the West). He takes the life of everything into consideration because it has a force that interacts with his own. Hence the environment is safely preserved in rural communities Africa.

Conclusion

In all of this, the point made in this paper is that human obligation to posterity and the world environment is an inevitable, inviolable and inalienable experience; a natural duty that inheres in our being, making us collectively responsible for the environment (as illustrated by the African worldview). There is no way, therefore, that we can exonerate ourselves from the responsibility (like the Western worldview would suggest), just because we can rationally decipher that posterity does not exist. Thus, we must deliberately act beneficially for posterity at all times because whether we like it or not; whether we engage the conduct consciously or unconsciously, we constantly act for posterity (as the African worldview demonstrates).

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Why Is The Low-Carbon Leisure Life Possible?

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Abstract: With the rapid development of social productivity and the accumulation of wealth, it enhances the potentiality and opportunities sharply that people participate in leisure life. However, entering the high-speed development period of industrial society, people don't feel relaxed but repressed, resulting in the alienation of leisure life, which brings damage in nature, society and human beings. As a solution to the current ecological problems, low-carbon leisure life becomes an advocated lifestyle that can achieve relaxation, entertainment, personality development and nature returning simultaneously.

Key words: Low-carbon leisure life, happiness, harmonious coexistence

Introduction

Being an important space for human survival and development, leisure is also the living state of human nature. Throughout a person's life, Leisure activities are both a part of living and a part of life. Leisure is seen as an important activity since the ancient times. In Ancient Greece, leisure, attracting much attention, is the ideal life and spiritual home that people are longing for. Aristotle pointed out clearly that happiness exists in leisure. With the development of social history, leisure evolves constantly. From a global perspective, all countries of the world experienced or are undergoing a revolution of leisure. In general, when per capita GDP is reached 1,000 US dollars, people will pay much attention to leisure needs. Currently, leisure development in China is facing unprecedented challenges and opportunities, due to these reasons such as the acceleration of industrialization, population growth, environmental destruction, the speed-up pace of life.

Lost: contemporary leisure dilemma

According to statistics, after 20 years of reform and development, the living standards of urban residents in China has stepped over the poverty level, the sufficient food and clothing level into the well-off level. Now, people are moving forward to the rich level from the well-off level. In coastal areas, people have entered a richer or more affluent level. With the increase of the statutory holiday, about one-third time was spent in leisure. Therefore, leisure holds a growing important status in contemporary life. From the leisure taste perspective, leisure was divided into "elegant", "vulgar", "rude and vulgar", and "low and vulgar ". It has become a major issue increasingly that people pursue the quality of life and value on how to make leisure life more meaningful and valuable, how to make life more splendid.

With the application of modern science and technology and a

large number of machines, as well as, the rapid development of social productivity and the sharp increase of wealth, it enhances the potentiality and opportunities sharply that people participate in the leisure life. However, entering the high-speed development period of industrial society, the growth of material wealth does not make people feel relaxed but repressed, confused and busy, resulting in the alienation, commercialize and vulgarization of leisure life, which are harmful to human beings, nature and society. In the Industrial society period, generally, people believe that work can bring wealth, and make a better life for themselves and their families. Thus, getting more benefits and money becomes a symbol of success in life. Since life value was coerced by money, it then becomes appendages of money. Utilitarianism, pragmatism, money worship, egoism became credos of life, the leisure suffered serious alienation, which then leads to the relationship alienation between man and nature, man and society, and man and itself. "Work hard; enjoy fully," has become a dominant social value. The nature is conquered and plundered with impunity, and become landfill of consumption emissions, resulting in the situation "consumption control the whole life". Mankind's homeland is destroyed unprecedentedly, inner freedom is desecrated. People are reined by the desire for consumption and possession. The desire for possession and consumption, like the rope to an ox, pulls and enslaves man himself. After the desire become a symbol, people must be greedy. The leisure guided by "desire" possesses the leisure shell only, not the real leisure. As a means of consumption, leisure is just a flag and guise, and subjects to consumption needs. Actually, consumption is the center surrounded by all. Human nature is greatly suppressed by expanding material desires and fanatical consumption pursuit. Thus, some people regard leisure as a lifestyle to seek for the boasting consumption and enjoyment, they think wrongly that the leisure is equated to the satisfaction of sense. In their opinion, leisure is synonymous with power and money, that is to say, it is to meet their desire for power, lust, material unrestrictedly. However, no man is content, it is doomed to chase consumption endlessly, which joins

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people's all the wisdom and strength together in plundering and extracting natural resources. In the case, it will result in the violence to the nature endlessly, and the destruction to nature. At the same time, after getting rid of the heavy work, people will fall into endless desire unconsciously, making itself into the slave of technology, money, power. Since they only enjoy the present moment fully, people would pursue material satisfactions fanatically and desire for it. Time is cyclic in previous period, while is linear now. As a result, psychological time of people has gone forever. Scarce leisure time causes a lost of original serenity, calmness and elegance of life, resulting in a hurry and a sense of crisis, so that people lose their taste and feelings for life, leading to various problems, especially for the rise of man's psychological pressure. Like a gamble, life is full of mania, people pursue the maximization of power and wealth, and social mechanisms are tools to achieve personal ambition and accomplishments. In some degree, being slaves of material goods and time, people achieve their social status by utilizing leisure time. That betrays the essence of leisure, because the real leisure is to be self-improvement and promote social civilization. Published in 1899, in "the theory of leisure class", Tostan • Veblen says, "To impress other people is the purpose of all the commodity consumption and leisure behavior, and it can distinguish themselves from the ordinary."

Low-carbon leisure life- the Perfect Trip of Habitat Environment Construction

Under the circumstances of deteriorating natural environment continually, interpersonal tensions, and physical and mental fatigue, low-carbon leisure is a solution to the current ecological problems. Aiming at reducing carbon emissions, Low-carbon life asks people to reflect on their current life style, and change it at the same time. So that it will be conducive to resolving man's survival crisis, and to maintaining man's free comprehensive development and sustainable development of society. Essentially, leisure is a kind of experiential activity that people are engaged in pleasuring their mind and body and developing themselves in leisure time. It is also a process to get rid of the shackles, develop their potentiality, and be a "real man". Low-carbon life and leisure life are consistent in humanity presets, life goals, life interest and mission. Under the guidance of low-carbon leisure values, people can achieve relaxation, entertainment, personality development and nature returning simultaneously.

Leisure life and low-carbon life are consistent in humanity presets.

Leisure has some obvious characteristics such as humanity, sociality, and creativity. In the process of leisure, it makes the leisure subject do an experience in the aesthetic, moral, creativity and exceeding in his spirit of freedom. In terms of its nature, leisure does not mean a large-scale consumption. Leisure activity is not to obtain material wealth in the subjective, or to cost a large amount of material resources in the objective, which coincides with the

low-carbon life. To some degree, leisure can achieve its own harmony, and enrich integrity and comprehensiveness of humanity. Besides, leisure strives to protect the ecological environment and build a beautiful home. In general, low-carbon life refers to minimizing the energy consumed in daily routine. It is to reduce carbon emissions especially for carbon dioxide emissions, to reduce pollution, and to slow ecological deterioration by fuel-efficient, electricity-saving, solar-saving, recycling. Firstly, low-carbon life is a kind of harmonious natural life between man and nature. Secondly, low-carbon life is to re-implement the harmonious relationship between man and nature, and to implement a virtuous circle life-style about "Man - Carbon - Nature". Thirdly, low-carbon life is to concern about the overall value between man and nature. Furthermore, it reflects on behavior of high-carbon emissions in life consciously, saves energy and reduces emission, promotes harmonious coexistence between man and nature from the people's lives and livelihoods perspective.

Leisure life and low-carbon life are consistent in target

Living a happy life is the target of leisure life and low-carbon life. Generally, there are four meanings about leisure: First, it is the consumption to a person's leisure time in the specific space from the temporal sense; second, it refers to meeting people's leisure activities from the behavior sense; third, it is the survival state that life itself is free and independent from the aspect of the life meaning; fourth, it refers to achieving human leisure spirit from the awareness campaign sense. Leisure life is to maintain, enjoy, experience, create and transcend through a series of practical activities. It is to pursue inner peace and harmony, aiming to achieve heaven and earth, and moral realm. Low-carbon life is not only a lifestyle of low-energy, low-consumption, low-spending, but a kind of environmental friendly, neat, simple, fashionable life. It returns to an authentic creative simple life by abandoning unnecessary complexity, throwing away the tediousness and cumber, abandoning excessive luxury, abstaining from "convenient hobby ", and not pursuing "face consumption". All roads lead to Rome, as low-carbon life and leisure life. They are existed in improving the quality of life constantly, making life more meaningful and more valuable, and making people live a happy and sweet life. Low-carbon leisure is closely linked with people's happiness. Human can create, taste and feel happiness in leisure. Leisure life pursues happiness, and the subjective experience of happiness must be demonstrated by leisure and enjoyment. Although labor can show the happiness, while, a happy life depends on leisure largely. In the one-sided view of happiness, material pursuit is expanded abnormally; nature is a site on extracting wealth and discharging of waste. As it were, when pursuing the happiness, we not only forget the nature, but hurt the nature deeply; we not only damage the material nature causing ecological environment problems, but also breach the involuntary life. In the pursuit of pseudo happiness, leisure time has gone, nature has gone, sub-health appears, pressure increases, mental anxiety appears, thus, mental illness strikes. Ironically, before our pursuit of

materialistic happiness, the "beautiful, natural, original" natural thing is existed, while is scarce now, it needs to gain from a double efforts. The public are eager to embrace various consumptions such as "original", "natural" and "handmade" consumptions, "natural" has become the most scarce life resource and lifestyle. At present, standard of living has improved, but less happiness. One of the reasons is that people are not kind to nature, consumed and alienated nature. As an important source of happiness, natural things and natural life is also an indicator of happiness index. Happiness is not far away from nature, and not lack of virtue. The standard of happiness is not to own material wealth as much as possible, but to make one play his function well. According to human's virtue, man and nature are solidarity, co-prosperity and coexistence. People can get their material life and the meaning of life from nature, thus, they need to maintain natural harmony and beauty. It can make one play his function well on the harmony between man and nature, excluding infringing nature. In fact, if we were far away from nature, and damaged nature, we couldn't play ourselves function well including rational features, technological features, colonial features and creative features, so do leisure. Thus, it must follow the laws of nature.

Leisure life and low-carbon life are consistent in mood

Leisure life and low-carbon life are consistent in mood: dwelling poetically. The leisure, in traditional Western leisure philosophy, based on dichotomy ideological model of "labor - leisure", is to relieve the work pressure or to recover the scars caused by work. While, in the thought of Chinese traditional leisure, it emphasizes the overall harmony of life among Confucianism, Taoism and Buddhism, and emphasizes the principle of "integration of nature and man." Leisure includes life activities and work. It is the leisure that makes a living and devotes oneself to society, so do the self-realization and life experience. Human's eternal dream and theme is to pursue the harmonious and beautiful future. Harmonious coexistence between man and nature is a kind of beauty. It is blend with the "existence of destiny", mainly for the coexistence of "Man - nature - society", which means that human is entering brilliant civilization from barbarism. This is an expectation of good that human dwell in the earth poetically and can complement and co-exist with nature. Man is dwell in the earth poetically, essentially, man is with the nature. Dwell poetically makes people feel boundless pleasure of life, and obtain the life of peaceful spirit and broad-minded, optimistic inner world. The condition of poetic life is that there not only is poetic garden for human habitation, but also individual mind. A personal mood in life depends on the extent of the individual spiritual realm and moral cultivation. There are four realms in life, for example, the "desire realm", "realistic realm," "moral realm" and "aesthetic realm". It is the desire realm that refers to the least desire for meeting personal living, which is the lowest realm; realistic realm is the "living architecture" of "the relationship of subject - object "; the moral realm regards the comprehension to the integration of creature's relations as the highest goal of spiritual

pursuit; while the aesthetic realm belongs to "living structure" of "high-level integration of subject-object". The people of dwelling poetically generally achieve the state of "moral realm" and "aesthetic realm", in which people are with the world. As Han Wo of Tang Dynasty says, in "mountains", "a sweet heart can open the door of fairies and immortals", that is to say, poetic life is existed in our hearts and eyes. As the highest level and main way of leisure, aestheticism is also one of the essential characteristics of leisure experience, which means that leisure is an aesthetic living, aestheticism is a realistic aestheticism. There are many examples on aesthetic realm of leisure in China, such as "Doing Nothing" of Lao zi, "The Theory of Zeng Dian" praised by Confucius, "While picking asters Neath the Eastern fence, my gaze upon the Southern mountain rests" of Tao, Yunming. "Low-carbon leisure" is a kind of leisure concept and lifestyle that does not impose personal willing on nature. It is the consciousness transformation of dwelling, the appreciative attitude to nature and the perfect feeling to environment that make people rediscover the significance of natural environment, advocate the way of "doing nothing" and "listening", and respect the heterogeneity of nature. Although there is a harmonious and inseparable relationship between man and nature, it still maintains a distance. Thus, we should respect the heterogeneity of man and nature. "Grass is growing in the first month of summer, trees with plenty of branches and leaves are around the house. The birds are happy with this habitation and singing for, and I also love my house". Although people are fond of the singing of birds, they cannot keep the birds in cages for enjoyment. People can attract thousand of birds to chirp and sing by greening our surroundings of homes. Low-carbon leisure emphasized that man and nature should live harmoniously, the subject regards no longer the nature as an object of plunder and consumption, but to appreciate, enjoy, imagine as well as create it. On the one hand, nature enters into our inner world, and our soul is traveling in the boundless nature, thus, man and nature achieves a integration in the metaphysical level; on the other hand, as a practice, leisure realizes the harmony between subject and object. Differs from the labor of living, leisure is no longer a form that there is a division, antagonism and confrontation between subject and object, even swallowed mutually. It is strived to achieve a unified body between subject and object, and a coordinated body in subjects. The happiness of subject is not only derived from his experience, and his physical and mental harmony, but gained from a coordinated coherence in objects and other subjects. Once there being an integration of man and nature, the life would be true, good and beautiful. As the saying goes, "listening to the running water can strengthen the ear, watching the grain and green grass can support our eyes, reading and understanding can nourish our heart; playing guqin and writing can smart our brain, traveling and climbing can revitalize our feet, rest can recover the skeletal muscle". There is no link between satisfying leisure and excessive consumption. Leisure does not destroy the ecological environment. The goals of low-carbon leisure consumption are to achieve human's inherent

enjoyment and development, to obtain the inner freedom, and to access the health and happiness. Beyond that, it hasn't other material and utilitarian purpose. As a way of leisure, the consumption of material wealth would be obeyed or restricted to leisure purpose, which wouldn't lead to the waste and damage to the environment.

Leisure life and low-carbon life are consistent in mission

Leisure life and low-carbon life are consistent in mission: promoting the comprehensive development of man. Generally, leisure is to work better. In fact, labor is the premise and foundation of leisure, leisure is the purpose and destination of labor. "People are not only qualified for the work, but also able to enjoy leisure time. Once again, we must emphasize that leisure is the unique nature of life. As the purpose of labor, if necessary, leisure is preferable to labor. Thus, we must know what people do in their leisure time. Due to the increasing leisure time, people have abundant leisure activities. From leisure effect, leisure can be divided into "elegant leisure", "vulgar leisure" and "evil leisure". As an accumulation of human culture, "elegant leisure" refers to the leisure lifestyle in spiritual and cultural level, and it is essential for improving the quality of life; "vulgar leisure", with features of entertainment and comfort, refers to a leisure lifestyle of popularization, and it can meet the needs of popular leisure; "evil leisure", with destructive and self-destructive features, is the unharmonious leisure lifestyle among society, nature and people, and it is an unhealthy, uncivilized, non-scientific lifestyle.^[6] The breeding and development of low-carbon leisure is the effective path to a personal comprehensive development. It makes people not only obtain the condition and opportunity for personal development, but gain real development in this process. An important prerequisite for human comprehensive development is that the free leisure time increases, and the degree of that depends on the free degree of leisure activities. Marx recognized fully and energetically the role of leisure time to human comprehensive development. "Actually, time is a positive existence of people, and it is not only the scale of human life, but also a space for human development". "Free time is that you can govern time freely, which is not absorbed by labor directly, but for rest and entertainment, and then opening up a vast world for free movement." In general, only when people have sufficient leisure time and material, can the changes be possible for people to pursue life from material level to a higher spiritual level, from training one-sided labor skills to cultivating comprehensive capacity and quality. In turn, the pursuit of comprehensive and nonmaterial will promote the development of social production, and convoy the development of leisure for people. It can be said that leisure is a prerequisite for development. One can not develop himself if he can not enjoy or absorb positive achievements and human civilization in leisure. In the process of leisure, people can develop their own comprehensiveness, maximize own potential, show own unique personality, and express own freedom. It is an important condition and guarantee for human

comprehensive development to cultivate and improve the low-carbon leisure quality. By reducing carbon emissions, and not destroying ecological balance, leisure subject cultivates effectively human ecological attainments, improves comprehensively human ability, enhances the consciousness of ecology, and promotes harmonious coexistence in human and nature, human and society, which will achieve sustainable development of human. Based on low-carbon life concept of ecological civilization, ecological conscience jumps out the subjective philosophy of subject-object dichotomous framework. It develops "symbiosis" philosophy in the integration of man and nature: from the meaning of ultimate value, sticking to the position that human is the highest value in ecosystems; in a way of achieving ultimate value, sticking to the view that nature is the fundamentality of ecological value and human value. In other words, the ecological conscience is that mankind can form a deep duty in maintaining harmony between man and the ecological environment, and an assessment capability for human own behavior to ecological environment, after regarding himself as a member of ecological environment, and bringing his behavior into natural activities.

In a word, when people are wandering in harmonious living environment leisurely, human will not feel lonely, the world will not become desolate, nature do not be cruel. Only adhering to the life attitude of "people have a rest leaning on trees", we can achieve the sustainable development of economic and production activities in taking human interests and values into account, and maintaining natural interests and values simultaneously.

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A Study On Cognitive Experiential State And Its Impact On Outcome Behaviour In E- Retailing In India

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Abstract: According to the recent studies, two online customer experience component variables that are affective experiential state and cognitive experiential state lead to the outcome behaviour. In this study cognitive experiential state and its influence on the e-retailing customers are considered. Using descriptive research design, questionnaire was constructed and the responses of 500 e-retailing customers were collected. The finding of the study indicates that the respondents in the age group of 21 -30 were the major contributors for the growth of online shopping in India. The interactive speed highly influences the cognitive experiential state of the customers. The positive correlation between all the variables indicates the importance of cognitive experiential state towards e-retailing.

Key words: Cognitive, skill, telepresence, interactive speed

E-retailing is a recent trend in marketing in India. This paper reports the results of cognitive experiential state and its impact of all these components on the outcome behaviour that are online shopping satisfaction, trust in online shopping and repurchases intention. The study indicates that there is a positive correlation between all the variables. The regression analysis also shows that model fit and significant impact on outcome. Background to the study, including the importance of cognitive style which is introduced in part one. This is followed by the brief description of research framework underpinning the whole project, and research methods utilized. Main findings of the study are then presented and discussed.

Introduction: cognitive experiential state and e-retailing

Cognition, in a marketing context, has been found to be influenced by the emotional state of the individual. Emotion can influence the encoding and retrieval of information by consumers from memory and create the condition of “state –dependent learning” in which content learned by an individual in one affective state is best recalled when subsequently in the same affective state.

Cognitive style is indicated when the purpose of processing information is to solve the problem or to learn. Cognitive experiential state (CES) is described as an element of online customer experience (OCE) related with the conscious thought process (Rose, Clark, Phillip, & Neil, 2012). Cognitive experiential state works in the concept of “*Flow*” in which the person is fully captivated in doing a particular activity that the person is becoming psychologically absorbed and inattentive to time and circumstances surrounding them (Csikszentmihalyi, 1997). Keller (1993) Established significant differentiation based on traditional value positioning of a product is no longer realistic till it is integrated with the total experience of the customer with the brand and firm. Experiential benefits relates to what it feels like to use the product or

service and also usually corresponds to the product related attributes. These benefits satisfy experiential needs such as sensory pleasure, variety and cognitive simulation. Thomas P. Novak., Donna L. Hoffman., & Yiu Fai Yung (2000) have found online executives note that creating a compelling online experience for cyber customers is critical to creating competitive advantage on the internet

The e-retailing(less frequently; e-retailing, e-tailing, etc.) is the concept of selling of retail goods using electronic media, in particular, the internet. The vocabulary electronic retailing, that was used in internet discussions as early as 1995, the term seems an almost inevitable addition to e-mail, e-business and e-commerce, etc. E-retailing is synonymous with business- to- consumer (B2C) transaction model of e-commerce. Although e-retailing is an independent business model with certain specific constituents like; trust model, electronic transaction process, etc, but in reality it is a subset of e-commerce by nature. E-tailing (less frequently: *etailing*) is selling of retail goods on the internet. E-Retailing stores sell online promotion only for goods that can be sold easily online. The online retailing requires lot of display and specification of products to make the viewers have a personal feel of the product and its quality as he gets while physically present in a shop. The rapid development of the technologies surrounded the Internet. Companies are interested to sell their products through their website even though buyers and sellers were located thousands of miles apart. Internet is a new virtual medium with many potential consumers; the online retailers must understand what are the wants and needs of such consumers. Online retailing is a new retailing medium. Online consumer behavior is diverse from traditional consumer behavior.

Research framework and methodology notes

The major purpose of this comparative study is to identify the factors affecting cognitive experiential state of e-retailing consumers

and to analyze the relationship cognitive experiential state on the outcome variables viz., trusts in online shopping, online shopping satisfaction and repurchase intention.

Research framework

The established S-O-R (stimulus-output-response) framework as found within many online purchase intention models (Koufaris, Kambil, and LaBarbera 2001; Perea y Monsuwe, Dellaert, and Ruyter 2004; Shin et al, 2001) is adopted for this study .The model is composed of two types of variables, cognitive experiential state and outcome behaviour.- supported within the literature. Five antecedent variables of cognitive experiential state as identified by Novak, Hoffman and Yung 2000 are included in the model. i.e. skill, challenge, telepresence, interactive speed and flow state. The three outcome behaviours are satisfaction, trust and repurchase intention.

Methodology notes

Descriptive research design is used for the study. The

respondents of the study constitute e-retailing customers all over India. The data was collected from 500 respondents through the survey methodology. The sampling technique used is judgment sampling. Only those who are involved in online shopping were considered for the study. Primary data was collected through a questionnaire and the secondary data was collected through various research journals and IAMA survey report.

Main findings of the study

Cross tabulation of gender and age

Table 1.1 reveals that out of 299 male respondents, 176 respondents have more than 3 years of experience in online shopping. 52 male respondents have 2 to 3 years of experience while 48 male respondents have 1 to 2 years of experience in online shopping. In the case of 201 female respondents 95 have more than 3 years of experience followed by 51 respondents who have experience of 1 to 2 years in online shopping.

Gender	Experience in Online Shopping			
	less than one year	1 year - 2 years	2 years to 3 years	More than 3 years
N=500				
Male	23	48	52	176
Female	22	51	33	95

Table 1.1 Cross tabulation between gender and experience in online shopping

Gender	House hold product	Books	Clothes	Ornaments	Electronic items	Durable goods	Non-durable goods
Male	25	79	44	9	133	6	3
Female	32	81	24	30	27	7	0

Table 1.2 Cross tabulation between gender and type of product

Table 1.2 represents 133 male respondents were more interested in purchasing electronic items, when compared with female respondents who were only 27. Similarly 81 female respondents were interested to buy books through online when compared to 79 male respondents.

Gender	Amount spent in online shopping in last 6 months			
	Less than Rs.1000/-	Rs.1001 to - Rs.10,000/-	Rs.10001 - Rs.20,000/-	more than Rs.20,000/-
Male	62	136	52	49
Female	61	93	25	22

Table 1.3 Cross tabulation between gender and amount spent in online shopping in last 6 months

Table 1.3 represents the cross tabulation between gender and amount spent in online shopping during the last 6 months. Out of the total 500 respondents 136 male respondents have spent Rs.1001 to Rs.10000/- while 93 female respondents have spent Rs.1001 to Rs.10000/- towards online shopping. Only 49 male respondents spent more than Rs.20000/- towards online shopping as compared to 22 female respondents.

Gender	Frequency of Purchase			
	Once in a week	Once in a month	Once in a year	During festivals
Male	41	140	29	19
Female	18	91	23	18

Table 1.4 Cross tabulation between gender and frequency of purchase

The cross tabulation between gender and frequency of purchase shows that maximum no. of respondents purchased once in a month.

Respondents were also involved in shopping during festivals or functions.

AGE	Experience in Online Shopping				
	less than one year	Between 1 year - 2 years	Between 2 years to 3 years	More than 3 years	
15-20	8	4	3	3	
21-30	25	78	66	220	
31-40	2	7	9	32	
41-50	7	9	6	8	
50 and Above	3	1	1	8	

Table 1.5 Cross tabulation between age and experience in online shopping

Table 1.5 represents the age of the respondents and their experience in online shopping. We could infer that 220 respondents in the age group of 21- 30 have more than 3 years of experience in online shopping. The respondents in the age group of 21 -30 are the major contributors for the growth of online shopping. Similarly 32 respondents in the age group of 31 -40 have also contributed by

participating in online shopping.

Table 1.6 indicates the difference between the age and the amount spent on online shopping by respondents.187 respondents in the age group of 21 to 30 spent about Rs.10000/- in online shopping during the last 6 months. Respondents in the age group of 21 to 30 are the majority who dominate online shopping.

Age	Amount spent in online shopping in last 6 months				
	less than Rs.1000/-	Rs.1001- Rs.10,000/-	Rs.10001 - Rs.20,000/-	More than Rs.20,000/-	
15-20	8	6	2	2	
21-30	105	187	53	44	
31-40	6	22	11	11	
41-50	2	12	7	9	
50 and above	2	2	4	5	

Table 1.6 Cross tabulation between age and amount spent on online shopping in last 6 months

Age	House Hold Product	Books	Clothes	Ornaments	Electronic Items	Durable Goods	Non-Durable Goods
15-20	5	6	4	4	4	1	0
21-30	38	131	46	66	90	7	2
31-40	7	11	4	3	20	4	0
41-50	9	10	0	5	4	1	0
50 and Above	4	2	3	3	2	0	1

Table 1.7 Cross tabulation between age and type of product

Table 1.7 indicates the age group and the various types of products purchased through online shopping. Respondents in the age group of 21 to 30 are the major contributors towards the growth of online shopping. Respondents in the age group of 21 to 30

prefer to buy books (131) followed by electronic goods(90),ornaments(66),clothes(46), household products(38),durable goods (7) and non durable goods(2) .

Age	Frequency of Purchase				
	Once in a week	Once in a month	Once in a year	During festivals or functions	Any offer is given
15-20	3	11	2	1	1
21-30	47	171	40	30	101
31-40	1	33	4	3	9
41-50	7	12	5	3	3
50 and Above	1	4	1	0	7

Table 1.8 Cross tabulation between age and frequency of purchase

Table 1.8 represents the 171 respondents in the age group of 21-30 purchase goods through online shopping once in a month. 101 respondents from the same age group purchased when any offer is given for the products in the website.

Mean and standard deviation of the cognitive experiential

state components

Table 1.9 reveals that interactive speed has the highest mean value followed by skill, telepresence and challenge. The mean value of 11.05 of flow component suggests that it is also an important component of CES.

Variables	Mean	Standard deviation
Skill	12.48	2.97
Challenges	10.30	2.94
Telepresence	12.01	3.82
Interactive Speed	15.91	2.05
Flow	11.05	1.66

Table 1.9 Mean and standard deviation of the components

Interrelationship among various variables

	Skill	Challenges	Telepresence	Interactive speed	Flow in online shopping	Trust in online shopping	Online purchase satisfaction	Repurchase intention
Skill	1	.340**	.277**	.348**	.284**	.482**	.655**	.643**
Challenges	.340**	1	.429**	.304**	.256**	.282**	.291**	.296**
Telepresence	.277**	.429**	1	.321**	.389**	.349**	.366**	.378**
Interactive speed	.348**	.304**	.321**	1	.193**	.435**	.360**	.437**
Flow in online shopping	.284**	.256**	.389**	.193**	1	.268**	.347**	.312*
Trust in online shopping	.482**	.282**	.349**	.435**	.268**	1	.594**	.798**
Online purchase satisfaction	.655**	.291**	.366**	.360**	.347**	.594**	1	.874**
Repurchase Intention	.643**	.296**	.378**	.437**	.312**	.798**	.874**	1

** Significant at 1% level of significance 2 tailed tests

Table 1.10 Correlation Coefficient among various variables

From the analysis it is inferred that there is a positive correlation between all the variables and is significant at 1 % level of significance. The highest positive correlation exists between repurchase intention and online purchase satisfaction, followed by repurchase intention and trust in online shopping. There is a positive

correlation between online purchase satisfaction and skill, followed by repurchases intention and skill.

Impact of cognitive experiential state on online shopping satisfaction

No	Variables	Coefficient	SE	't' value	'p' value
1	(Constant)		.900	-2.334	.020
2	Skills	.552	.036	15.210	.000
3	Challenges	-.021	.037	-.559	.576
4	Telepresence	.142	.029	3.695	.000
5	Interactive speed	.106	.051	2.948	.003
6	Flow state	.120	.063	3.352	.001
	R Value	.698a			
	R2 Value	.487			
	F Value	93.954*			

a. Dependent variable: Online shopping satisfaction.

b. Predictors: constant, skills, challenges, telepresence, interactive speed, flow state.

Table 1.11 Multiple regression analysis between online shopping satisfaction and cognitive experiential state

The multiple R value 0.698 shows a substantial correlation between the five predictor variable and the dependent variable. The R-square value indicates that 48.7% of the variance in online shopping satisfaction is explained by the five Predictor variables.

The Beta values indicate the relative influence of the entered variables. The skills has the greatest influence on Online shopping satisfaction ($\beta = .552$) followed by telepresence ($\beta = .142$) then flow ($\beta = .120$) and interactive speed ($\beta = .106$). The direction of influence

for all the five variables is positive except for challenges ($\beta = -.021$)

shopping

Impact of cognitive experiential state on trust in online shopping					
No	Variables	Coefficient	SE	't' value	'p' value
1	(Constant)		1.080	-1.759	.079
2	Skills	.330	.043	8.011	.000
3	Challenges	.013	.045	.298	.766
4	Telepresence	.145	.035	3.325	.001
5	Interactive speed	.257	.061	6.342	.000
6	Flow state	.065	.076	1.616	.107
	R Value	.585a			
	R2 Value	.342			
	F Value	51.397*			

a. Dependent variable: Trust in online shopping.

b. Predictors: constant, skills, challenges, telepresence, interactive speed, flow state.

Table 1.12 Multiple regression analyses between trust in online shopping and cognitive experiential state

The multiple R value 0.585 shows a substantial correlation between the five predictor variable and the dependent variable. The R-square value indicates that 34.2% of the variance in trusts in online shopping is explained by the five predictor variables. The beta

values indicate the relative influence of the entered variables. The skills have the greatest influence on trusts in online shopping followed by interactive speed then telepresence. The direction of influence for all the five variables is positive.

Impact of cognitive experiential state on repurchase intention

No	Variables	Coefficient	SE	't' value	'p' value
1	(Constant)		2.384	-2.279	.023
2	Skills	.519	.095	14.377	.000
3	Challenges	-.025	.098	-.674	.500
4	Telepresence	.151	.078	3.973	.000
5	Interactive speed	.201	.136	5.653	.000
6	Flow state	.074	.167	2.078	.038
	R Value	.703a			
	R2 Value	.494			
	F Value	96.516*			

a. Dependent variable: Repurchase Intention.

b. Predictors: constant, skills, challenges, telepresence, interactive speed, flow state.

Table 1.13 Multiple regression analyses between repurchase intention and cognitive experiential state

The multiple R value 0.703a shows a substantial correlation between the five predictor variables and the dependent variable. The R-square value indicates that 49.4% of the variance in repurchase intention is explained by the five predictor variables. The beta values indicate the relative influence of the entered variables. The skills has the greatest influence on repurchase intention ($\beta = .519$) followed by interactive speed ($\beta = .201$) then telepresence ($\beta = .151$), flow ($\beta = .074$) and challenges ($\beta = .025$). The direction of influence for all the four variables is positive except for challenges.

that skill and technical capability of the user determines experience of the website. Interactive speed is viewed as part of the overall judgment of experience.

The explanatory power (R^2) of the predictor constructs range from 34 percent to 49 percent. Examination of the change in R^2 can help to determine whether a predictor latent variable (LV) has a substantial and significant effect on a particular predicted LV. The influence of the predictor variables on online satisfaction and repurchase intention is more than 40%. The influence of the predictor variables on trusts is only to the extent of 34.2%.

The marketer must devise strategies to control the emotional state of the customer in order to retain the customer

E-Retailers should be cautious about short term tactical measures often assumed to build loyalty. Rather they should view OCE as a long term strategic priority that builds consistent brand differentiation and competitive advantage.

The role of online shopping experience may vary across industry context. The role of habit in enhancing repurchase intention

Discussion on the implication of the study

From the above study, it can be concluded that cognitive experiential state plays a vital role on the e-retailing customers. The implications can be derived from the study that are relevant for future research, and e-retailers, which are discussed as follows.

This study helps e-retailers to distinguish between factors that make a distinct difference to an online shopping experience from those now seen as the norm by online shoppers. The findings suggest

is salient in contexts where online shopping remains in its infancy stage e.g., grocery shopping.

In conclusion, this paper has focused on the impact of cognitive experiential state on the three most important outcome variables related to online shopping experience. Findings of the study provide insight on the major factors influencing e-retailing customers.

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The Comparison of Phrases with the Word “Hao” between Chinese and English Language

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Abstract: The degree adv. “hao”, despite of its lonely usage, is frequently used in modern Chinese, and more often collocate with verbs to form new phrases. Some formations change the category of part of speech, and some don't. There are conditional select restrictions for verbs of those changeable phrase structures in part of speech: the verbs must be dynamic transitive ones, and represent static adjectives with “hao” together in the constructions. Although these VPs are adjectivized, we must show the presentation of the “actions” in translation from Chinese into English.

Key words: adverb “hao”, adjectivized VP structures, word order

Introduction

The degree adv. “hao”, despite of its lonely usage, is frequently used in modern Chinese, and more often collocate with verbs to form new phrases. Some formations change the category of part of speech, and some don't. Those without unchangeable part of speech are the phrases with the word “hao” behind verbs to form “hao” construction.

E.g. (1)

“qing chi hao.” Its version is “Help yourself, please!”

The word “chi” is followed by “hao” to be “chi hao” in example (1), which is still a verb phrase, and the word “hao” is used as degree adv. To modify the verb. The formation is unchangeable in its part of speech. But on the other hand, the changeable constructions in part of speech are the phrases with the word “hao” ahead of verbs to form “hao” formations, which are not verb phrases, and they are adjectives.

E.g. (2)

“zhe xie dong xi hao chi.” Its version is “The food is delicious.”

The word “hao” is put ahead of the verb “chi” to be “hao chi” in example (2), the formation is changeable from verb phrase into adj.. The formation can be stable in its part of speech, only if in the case we fix the word “dian” in between to be “hao dian chi”. At the same, the word “dian” can also be used in example (1) to be “chi hao dian”, which is unchangeable in its part of speech.

This formation does often basically occur in our daily life in China, and there are fewer experts to pay due attention to this phenomenon.

Some scholars investigate in it from the category of independent part of speech of a verb or an adjective, and they only deal with it in the field of syntax and semantics.

VP Formation

All VPs are composed of verbs and NPs in English and Chinese. The constructions for VPs attached with the adv. “hao” can be adjectivized in Chinese. In the new system, VPs, the heads, are the complements of the adv. “hao”, and the complementary elements are theoretically adjectivized to be APs with the word “hao”.

E.g. (3)

a. AP → Adv A NP

b. NP → DP NP

c. DP → D' NP NP

d. NP → N'

e. N' → N ...

The basic formations for APs are theoretically described in examples (3)a_e, and we can make clear the relationship between “heads” and “complementary elements” in hierarchical relations.

There are similarities and differences between Chinese and English sentence structures. From the perspective of VPs, all the finite verbs cannot follow covert subjects in the two languages, and all the subjects must be overt.

E.g. (4)

a. play basketball

b. da lan qiu (打篮球)

We don't know “who” is in the subject position in example (4)a_b without context. So we can see there are no problems for VPs without “covert subjects”, and the question lies in what make the VPs formed with the word “hao” adjectivized in Chinese, while

not adjectivized in English? In our eyes, there is only one reason: word order, which means the lexical item array of position among Specifier, Head and Complement in a phrase construction. On the other hand, the meaning of a phrase differs when the “specifier” and “complement” are changed in their different positions before or behind the “head”, and the word are the same, only word orders are changed.

E.g.(5)

- a. (关门) guan men (close the door)
- b. (关好门) guan hao men (close the door well)
- c. (门关好) men guan hao (close the door well)
- d. (门好关) men hao guan (it is easy to close the door)

With the positional variation of the word “hao” in example(5)a_d, i.e. the change of “word order”, the “head” also be changed in VPs. It is a VP in example(5)a, which shows “an action to close the door”. It is also a VP in example(5)b, when the word “hao” is put in, after the verb, between the word “guan” and “men”, which is a modifier of the verb, or “complementary element” of the verb, to show a consequence: close the door firmly. And the noun moves to the position before the verb in example(5)c, at this time, in fact, there exists a covert element, the word “ba(把)”, in Chinese, i.e. “(ba) men guan hao”. Its meaning is as well the same as example(5)b, it is also a kind of consequence: “close the door firmly”. On the other hand, it is different in example(5)d, the word order alters completely, its meaning is also changed. We can make clear the variation of part of speech for the “head” in the phrase construction with word order’s alteration in example(5)a_d. Only when the word “hao” is moved into the position before the transitive verb and behind the noun which is moved from the position after the verb into the head position of the phrase, can be the VP changed into an adj. In part of speech, and in the version from Chinese into English, we must embody the “action”.

The choice of verbs

only some of verbs, not all of verb, can combine with “hao” into APs (adjective phrases), because there exist some restriction about the choice of verbs: only dynamic transitive verbs can collocate with “hao” to be static adjectives.

At first, dynamic transitive verbs are not ordinary verbs, they can be followed by objects, secondly, they are dynamic, not static, such as “chi, wan, yong, da, long,

kan(吃、玩、用、打、弄、看)”. They show dynamic “action”, whose objects illustrate “passive action”, which are the postpositive elements of the “actions”, the “action” and the “receiver of the action” combine together to be VPs.

E.g.(6)

- a. chi fan (吃饭) (to eat dinner)

- b. wan pai(玩牌) (to play cards)
- c. yong che(用车) (to drive a car)
- d. da qiu(打球) (to play ball)
- e. long qian(弄钱) (to get money)
- f. kan xi(看戏) (to see a movie)

The phrases above are VPs, and the verbs “chi, wan, yong, da, long, kan(吃、玩、用、打、弄、看)” combine with nouns into the constructions. They are logically well formed, not “illegally” formed in Chinese. All those legal phrases can be extended, and the extension is diverse, one of it is that the word “hao” can be put into the positions before verbs, so example(6)a_f are changed into the followings:

E.g.(7)

- a. hao chi fan(好吃饭) (It’s time to eat dinner)
- b. hao wan pai(好玩牌) (It’s time to play cards)
- c. hao yong che(好用车) (It’s time to drive a car)
- d. hao da qiu(好打球) (It’s time to play ball)
- e. hao long qian(好弄钱) (It’s time to get money)
- f. hao kan xi(好看戏) (It’s time to see a movie)

In our opinions, the meanings of the VPs with “hao” ahead of the verbs are changed, they all mean that “it is the most suitable time for sb. To do sth., and no one comes here to bother.” When we translate example(7)a_f into English, it is quite wrong for us to only add an adverb “well” to the head position of the VPs, the correct faithful understanding to the source VPs must be “it’s time (for us) to do sth.”. So there appear dissymmetry, asymmetry and discordance in the versions from Chinese into English. The part of speech for the verbs cannot be changed in Chinese, they are still “dynamic transitive verbs”. And the differences of expressions between Chinese and English in understanding are mainly due to the information variation caused by the addition of “hao”.

If we readjust the word order to move the NP to the position before the word “hao”, then the word “hao” lies in between of the NP and VP, and example(7)a_f can be changed into the followings:

E.g.(8)

- a. fan hao chi (饭好吃) The meal is delicious to eat.
- b. pai hao wan (牌好玩) It’s funny to play the cards.
- c. che hao yong (车好用) It’s easy to drive the car.
- d. qiu hao da (球好打) It’s easy to play the ball.
- e. qian hao long (钱好弄) It’s easy to get money.
- f. xi hao kan (戏好看) It’s interesting to see the movie (drama, opera etc.).

The phrases “hao chi, hao wan, hao yong, hao da, hao long, hao kan(好吃、好玩、好用、好打、好弄、好看)” are no longer verb phrases in example(8)a_f, and continuously, they become static adjectives, simultaneously, they get the meanings of dynamic verbs. And there leave traces in the movement processes of “hao” from example(7)a_f

to example(8)a_f, the former overt “actions” in the structural configuration are transformed into covert “actions”. So we must apply infinitive to illustrate these “actions” in translation from Chinese into English, and when we use antecedent “it” in the complex structure of infinitive to represent these “actions”, the former objects are transformed into subjects, so there exist different meanings in cognition for the infinitive structure. Although the sentence structures are no more than the same in the structure “It’s + adj.+inf.”, the meaning of each sentence is perhaps not the same. It is “It’s funny to play cards in example(8)b(The game is funny.)”, not means “The kind of card itself is funny to play(The card is funny.)”. It is “It’s easy to drive cars in example(8)c(To master skills to drive cars is easy.)”, not means “The definite car itself is easy to drive.” It is “It’s easy to play balls in example(8)d(It is smooth in the game of playing the ball .)”. It is “It’s easy to get money in example(8)e, not means “(The kind of bill itself is easy to earn.)”. It is “It’s interesting to see the movie(drama, opera etc.) in example(8)f, the movie(drama, opera etc.) itself is interesting.”

Conclusion

There are exactly many grammar functions and semantic forms for verbs and adjectives, and the explanation is not sufficient as the follows to be drawn: firstly, the two lexical categories are not theoretically dealt with in transformation of part of speech in phrase

structures. Secondly, there is no reasonable explanation for the two lexical categories in the cognitive level of Chinese and English, we maybe make errors in translation. We regard the verb phrases as the heads and complementary elements of adverb “hao”, and theoretically, the “complementary elements” have been adjectivized to be adjective phrases (APs) with “hao”. With the overt movement of the word “hao” position in VP constructions, the part of speech of the “heads”, the verbs, in the VPs become changed, when “hao” moves to the positions before transitive verbs or behind the nouns moved from the positions behind verbs into the head positions before the verb phrases.

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“Happy Life” in Postmodern Consumer Society: A Thematic Study on Cheever’s Short Stories from a Baudrillardian Dimension

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Abstract: As a master of depicting American middle class, John Cheever was one of the most prominent short story writers in the twentieth century. This essay tries, from a Baudrillardian perspective, to discover and prove that the so-called middle-class “happy life”, described in Cheever’s stories, is nothing but a simulacrum coined by the ideology of consumer society. Only when people break through the world of simulacra, can they attain the real happiness.

Key words: John Cheever; consumer society; American middle class; simulacrum; Jean Baudrillard

Introduction

John Cheever, as one of the most prominent American short story writers in the twentieth century, a winner of various awards such as Pulitzer Prize and National Book Award, enjoys great reputation from both readers and critics.

Cheever was a master of depicting American middle class; he presented, in his works, vivid pictures of middle-class people’s life mode. It is true that the setting, issue and focus in most of the writer’s short stories were confined to the suburban middle-class life; this specialized writing, however, made Cheever indispensable. These middle-class people living in suburban area described in his stories are actually the representatives of typical American people in the postwar consumer society. Cheever’s realistic style enabled him to faithfully record and deeply reflect on the spiritual and emotional emptiness hidden behind their “happy life” in the “affluent” society of contemporary America.

Within a conceptual framework of Jean Baudrillard, the French scholar whose critical theory about consumer society provides an effective and unique insight for the understanding of contemporary world, I try to discover that the so-called “happy life”, described in Cheever’s stories, is nothing but a simulacrum coined by the ideology of consumer society with the purpose of blinding people and converting them into potential consumers.

Faith

Almost all of Cheever’s men and women come to the stage as devout adherents of so-called “happy life”, an ideal life mode of contemporary American middle class which seems wealthy, graceful and comfortable.

An attractive concept, “happy life” is almost the goal of everyone who believes in American Dream. Cheever, in his stories, tells the readers how those poor and simple people tried their best to

attain the dreamed middle-class-ship and the dreamed “happy life”.

In the running train, the Malloys (“O City of Broken Dreams”) are on the way from home to New York: their Mecca. The husband and wife can not hide their excitement and “felt their breathing quicken, as if there were not enough air in the coach”. (Cheever, 1980:48) Although the unsophisticated couple knows little about their destination, they rapturously dress up to embrace the coming “blest land”. When their home Wentworth was not worth staying, when “the slums of Manhattan looked wonderful” and when “the paving, deep in the station, had a frosty glitter ... [like] diamonds [being] ground into the concrete”, the irresistible life was calling them. (Cheever, 1980:50,51) What calls here is actually the “glittering diamonds”: the tempting life mode of wealthy New York middle class.

Unfortunately, when Evarts and Alice are going to answer “the call of life” and to merge themselves into this wonderland, they turn out to be those people’s entertainment. Finally the Malloys have to leave the dream-broken New York for home or for another imagined Mecca on the other coast. That night, just before they get on the returning train, “the dark, wet paving, deep in the station, did not glitter, but it was still Alice’s belief that diamonds had been ground into it, and that was the way she would tell the story”. (Cheever, 1980:66-67) The pilgrims pick up the pieces of their broken dreams and still stubbornly stick to the myth of a “happier” life.

With the same faith as the above-mentioned couple, Ralph and Laura Whittemore (“The Pot of Gold”) live “a saving and gainless life” and meanwhile follow “an uncompromising loyalty to the gentle manners of the middle class”. (Cheever, 1980:122) Although frustrated again and again, the Whittemores never give up their dream of getting wealthy and joining the middle class. Optimistic people they always are. “The city seemed to them a generous place, where people were rewarded either by a sudden and deserved development ... or by the capricious bounty of lawsuits, eccentric

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and peripheral business ventures, unexpected legacies, and other windfalls.” (Cheever, 1980:123-124) The overnight fortune and middle-class-ship thus become the contemporary version of American Dream.

Hard work together with good luck can certainly bring them “happier” life, people believe. Holding such an Attic faith Ralph tries continually to obtain his pot of gold, in order to “lead his family to a realm of reasonable contentment”. (Cheever, 1980:127) However, through so many failures the Whittemores’ standard of living keeps dropping.

When, at the end of the story, Mr. Hadaam is knocked down by a stroke, before the old man carries out his promise, and when “the lash of frustration was laid on and the pain stunned Ralph” (Cheever, 1980:138), his mind was seized by the chimeric picture of his bitter exploration during the past years.

Armed with a sharp spade and a homemade divining rod, he had climbed over hill and dale, through droughts and rain squalls, digging wherever the maps he had drawn himself promised gold. Six paces east of the dead pine, five panels in from the library door, underneath the creaking step, in the roots of the pear tree, beneath the grape arbor lay the bean pot full of doubloons and bullion. (Cheever, 1980:138-139)

The Malloys or the Whittemores, these pilgrims adhere to their “sacred” dreams and spare no effort to approach the tempting life mode of American middle class. Then, how is the realized American Dream like?

Mostly, Cheever’s middle-class family, owning cars and villa, lives in the New York suburb, with the man commuting between home and office in the city and meanwhile the woman staying home to raise children and manage housework. These families seem wealthy, graceful and comfortable. They visit each other, organize various parties, and enjoy holidays all over the world. The whole neighborhood is thus steeped in an atmosphere of success, prosperity and auspiciousness. Shady Hill,^① the suburban village inhabited by the wealthy middle class, witnesses such “happy life” everyday.

“I”, the protagonist in “The Ocean”, can be taken as an admirable example of typical “Shady-Hillers”. The protagonist, in the opening of the story, appears to be a lucky and successful businessman; even after he is betrayed and fired by the new president of Dynaflex, his pension, severance pay and the stock he owns can make up a large sum of money that is certainly more than enough to keep his family a rather comfortable life. He is, as his friend said, “a man who’s in a more comfortable position”. (Cheever, 1980:676)

Un“happy”

How happy they are!

How happy are they? Is their “happy life” really a happy one? From Cheever’s writings readers can easily make their judgment.

These affluent people in the affluent society, who seem happy enough to be admired, are actually suffering from various pains and troubles as the brilliant writer describes in his stories. Under the good-looking surface of so-called “happy life”, these “Shady-Hillers” encounter deteriorating economic situation, middle-age crisis, disagreement between husband and wife, runaway children, excessive nostalgia, anxiety, alcoholism, flirtation and adultery.

Cheever, through his works, keeps telling his readers that the so-called “happy life” is far from happiness; it is merely a mythical life mode coined by the consumer society.

Jim and Irene Westcott (“The Enormous Radio”) are a seemingly happy couple sharing a taste for serious music. Due to the poor performance of their old radio, they purchase a new one. However, the new radio doesn’t tune in music, but rather the unexpected daily sounds around the neighborhood.

From then on, Irene Westcott overhears, through this “enormous” radio, all kinds of secrets: the secrets of decent families, the secrets of genteel manners and appearance, and the secrets of so-called “happy life” of middle class.

Irene is bewildered and even driven mad by what she has heard through the black magic of this disturbing radio. She is totally shocked by all these unknown miseries and indelicacies under the cover of “decent” and “happy” life. However, the most dramatic scene occurs at the climax ending of the story. Jim, disturbed by his wife’s complaining, finally loses his temper and reveals his frustration and disappointment in his wife and in their life. Thus, the seemingly happy couple is, at the end of the story, proved to be as miserable and hypocritical as anyone they overheard through the enormous radio.

Neddy (“The Swimmer”) is also a typical false figure of “successful and happy middle-class man”. In the opening part of the story, he is a vigorous and optimistic middle-aged man who seems quite young because of his happy life and the happy atmosphere that morning. However, as his Odyssean voyage going on, change is for the worse. When the protagonist finally swims home, exhausted, he is astonished by the rusty and empty house in front of him.

Neddy step by step becomes tired, lonely and miserable; and “because of Cheever’s technical mastery the ending is both unbelievable and prepared for; the logic within the magic makes it inevitable”. (Segal, 1994:83-84) Thus, Neddy’s Odyssean voyage turns out to be a misery; and the hero, an anti-hero. There hides serious problem of American civilization in Neddy’s story: the so-called “happy life” is no more than an illusion.

The suffering of Neddy in the story is actually a typical portraiture of miserable middle-class “happy life” in Cheever’s works. Johnny Hake (“The Housebreaker of Shady Hill”), another representative of “Shady-Hillers”, turns himself into a depraved housebreaker when he encounters unemployment and has to keep a stable financial status to continue his family’s “happy life”.

The stolen money eases Hake’s economic burden; however, his

life becomes even more terrible in the following weeks. In fear of his disgraceful conduct being found out, he feels uneasy all the time; and wherever he goes, the world seems wicked and evil.

The protagonist in "The Ocean", also suffering from unemployment, does not need to worry about money at all. However, his life is no less miserable than Hake's. Becoming paranoid, he even suspects that his beloved wife is going to murder him.

All their "happiness", as shown above, is superficial and illusive; the truth of their life is an apple with worm in it. As Cheever describes in the story "The Worm in the Apple", "one was bound to suspect a worm in their rosy apple and that the extraordinary rosiness of the fruit was only meant to conceal the gravity and the depth of the infection." (Cheever, 1980:338)

Simulacrum

Cheever faithfully describes the detailed appearance of suburban middle-class families, and meanwhile soberly reveals the disturbing truth of their "happy life".

This so-called "happy life", the ideal life mode of contemporary American middle class, seems wealthy, graceful and comfortable. But actually it is merely a simulacrum, an illusion or a lie of consumer society's ideology with its purpose of concocting a myth of prosperous society and seducing people to consume insatiably.

In his important article "Simulacra and Simulations", Jean Baudrillard claims that the contemporary world is full of deceitful signs; and these signs are no longer traditional ones that contain signifiers and signifieds. In this postmodern world, the signified is always absent and sign become simulacrum: copy without an original, or reproduction without interest in its reference. A simulacrum actually refers to nothing; it is merely a mythological model that has no connection or origin in reality. Unfortunately, it is the model that determines the way people perceive the reality, i.e. "the map ... precedes the territory ... the map ... engenders the territory". (Baudrillard, 1988:166) Thus the boundary between real and unreal breaks down or, in Baudrillard's word, implodes.[®] Taking illusion for reality, contemporary people were deceived in the ideology of consumer society, and lost in a world of hyperreality where they can no longer tell the difference between real and unreal.

This contemporary ideology, as a set of social unconscious consisting of conceptions, value judgments, and symbol systems, legitimizes the structure and order of the current society, through education, mass media, cultural practices, telling repeatedly how things should be and how people should live. These ideas, often embedded in symbols (or rather simulacra), exert a subtle but decisive influence on people's cognition and affection, forcing them to accept the "correct" way of doing things, the "correct" sense of life style, and the "correct" understanding of their roles in the society. It is the ideology that molds the minds of people and ultimately makes them into what they are. The way the current society operates itself appears to be natural, and thus appears to be the eternal truth. In this way, the ideology justifies and maintains the current structure

and order of consumer society.

Any ideology, from a deconstructive viewpoint, contains contradictions and represses aspects that tend to contradict or expose the repressions. Coining so many pairs of contrastive concepts—lucky and unfortunate, wealthy and poor, graceful and vulgar, comfortable and miserable, good taste and bad taste, happy and unhappy, etc.—the consumer society always privilege the former concept in each binary, and meanwhile devalue the latter one. The ideology of consumer society, through cultural activities like light literature, pop music, sitcoms and advertisements, constructs pseudo-questions with pseudo-answers such as "what is good taste?" and "how to lead a happy life?" However, are these issues really central to the most fundamental human concerns, the moral and mental health, the justice and equity? Not really. In this process actually, all the harsh social problems, as those in the "Shady Hill", are "shaded".

That is the logic of consumer society. To earn more, to purchase more, to shape a fine taste, to follow the latest fashion, all these add up to a myth of middle-class "happy life". Advertisements, as an important means of broadcasting consumer society's ideology, function in everyday life and of course are not uncommonly seen in Cheever's stories.

The train creaked, slowed, and halted infirmly at another station ... Some advertisements were posted on the wall behind them (several people waiting at the station). There was a picture of a couple drinking a toast in wine, a picture of a Cat's Paw rubber heel, and a picture of a Hawaiian dancer. Their cheerful intent seemed to go no farther than the puddles of water on the platform and to expire there. The platform and the people on it looked lonely ... The train stopped again. There was another platform, another picture of the couple drinking a toast, the rubber heel, and the Hawaiian dancer ... ("The Five-Forty-Eight") (Cheever, 1980:289-292)

Contemporary people are thus surrounded with diffusing and penetrating advertisements and brainwashed into insatiable consumption. Unfortunately, the myth of "happy life" coined by the consumer society is merely a simulacrum that actually refers to nothing.

The protagonist in "A Vision of the World" experiences a feeling that the so-called reality "is actually more illogical, haphazard and illusory" (Hunt, 1985:174) and "our external life has the quality of a dream". (Cheever, 1980:606-607) His wife is sad that Saturday afternoon, confiding to the husband, "I just have this terrible feeling that I'm a character in a television situation comedy ... I mean, I'm nice-looking, I'm well-dressed, I have humorous and attractive children, but I have this terrible feeling that I'm in black-and-white and that I can be turned off by anybody. I just have this terrible feeling that I can be turned off ..." (Cheever, 1980:606) The wife is obviously trapped in the virtual image of media. Meanwhile, the protagonist is somewhat inspired through his

wife's stating that "the externals of her life had the quality of a dream" and "the uninhibited energies of the imagination had created the supermarket, the viper, and the note in the shoe-polish can". (Cheever, 1980:606) After returning home from the club that night,

I turned on the television set to a commercial that, like so much else I had seen that day, seemed terribly funny. A young woman with a boarding-school accent was asking, "Do you offend with wet-fur-coat odor? ... Safeguard yourself from embarrassment and anxiety by light applications of Elixircol before you wear your furs ..." She belonged to the dream world, and I told her so before I turned her off. (Cheever, 1980:608)

From a neo-Marxist perspective mixed with structuralist semiotics, Baudrillard, in his *The System of Objects*, argues that consumption has become the basic logic of contemporary society, and advertisements have taken over the moral responsibility of the society and replaced the traditional puritan morality with a hedonistic morality. All the free wills people have, in this commercial era, are unconsciously confined by the system of commodities. "Free to be oneself" in fact means: free to project one's desires onto produced goods." (Baudrillard, 1988:13) The consumer becomes the "perfect" social being through his agreement with commodities. To purchase is an activity that involves two systems: the individual and the production. This is the forced integration of the system of needs within the system of products. In this wise, "needs" are created by the objects of consumption. Objects signify social standing, and in consumer society they replace all other means of hierarchical division, such as race, gender and class. People are no longer ranked according to these obsolete mechanisms, but by the commodities they own—a universal code of recognition in consumer society. The person with the Rolls-Royce car is regarded higher on the hierarchy, as Cheever describes in his stories:

Her (Mrs. Brownlee's) diamond necklace is famous. So, indeed, are most of her jewels—most of them have names. There are the Taphir emeralds, the Bertolotti rubies, and the Demidoff pearls, and, feeling that a look at this miscellany should be included in the price of admission. ("The Children") (Cheever, 1980:218)

The Warburtons are always spending money, and that's what you talk about with them. The floor of their front hall is black-and-white marble from the old Ritz, and their cabanas at Sea Island are being winterized, and they are flying Davos for ten days, and buying a pair of saddle horses, and building a new wing. ("The Housebreaker of Shady Hill") (Cheever, 1980:303)

This new standard of hierarchical classification does not mean free from exploitation; "on the contrary, it appears that the constraint of a single referent only acts to exacerbate the desire for discrimination ... we can observe the unfolding of an always

renewed obsession with hierarchy and distinction." (Baudrillard, 1988:20) Consumption in consumer society is actually the manipulation of signs signifying social status through different buyings: a Rolls-Royce is different from a Santana. It is not the object itself that is consumed, but rather the specious shell covering the object.

In another important book *The Consumer Society: Myths and Structures*, Baudrillard writes that "the whole discourse on consumption ... is articulated on the mythological sequence of the fable: a man, 'endowed' with needs which 'direct' him towards objects that 'give' him satisfaction". (Baudrillard, 1988:35) However, this supposed sequence is only a deliberate distortion of the nature of consumer society, by ignoring the fact that the attitudes and 'needs' of the consumer are actually created, directed and controlled by the manufacturers: "the system of needs is the product of the system of production". (Baudrillard, 1988:42) Consumption is thus an everyday ideology in the form of "the liberation of needs", "individual fulfillment", "pleasure", "affluence" and "happy life", all with an ultimate purpose: persuading the consumers to buy. In Cheever's stories, readers can always find this kind of scenes:

"She has this money of her own," he went on. "I pay the tax on it, and she spends it all on clothes. She's got hundreds and hundreds of dresses and shoes, and three fur coats, and four wigs. Four." ("The Ocean") (Cheever, 1980:678)

Consumption has become a process in which the individual fills his life with "meaning". However, instead of making life meaningful, such "meaning" demolishes the true essence of life such as love, virtues, and peace of mind. When everything is evaluated through the so-called "taste", object itself disappears and all that left is vanity. In the story "The Lowboy", Richard wants that piece of furniture—the lowboy desperately, not for use but for decoration.

The lowboy was an elegant piece of furniture, and I wondered if he didn't want it for cachet, as a kind of family crest, something that would vouch for the richness of his past and authenticate his descent from the most aristocratic of the seventeenth-century settlers ... it was one of those pieces of cabinetwork that seem to have a countenance of the most exquisite breeding. It would be the final piece in the puzzle of respectability that he had made of his life. (Cheever, 1980:479-480)

For Richard, the lowboy is not a piece of furniture any more; the lowboy is his wealth, his fine taste and his social status. All these attractive concepts add up to a simulacrum, introducing an "admirable lifestyle", which actually only refers to vanity. Mrs. Holinshed's good English soap ("The Pot of Gold") is also a property loaded with the ideological promise of the so-called "better life".

Often, in such a consumer society filled with temptation and

desire, people are alienated from their human nature and become the attachment of objects. In "The Geometry of Love", Charlie Mallory recognizes the coat before he recognizes his wife. "One of the women wore a fur coat that looked like a coat he had bought his wife, Mathilda, for Christmas. Looking more closely, he saw that it was not only Mathilda's coat, it was Mathilda." (Cheever, 1980:702-703)

In the story "The Jewels of the Cabots", the narrator describes some buildings in his hometown as follows:

All the mansions had towers. These were round with conical roofs, rising a story or so above the rest of the frame buildings. The towers were strikingly unmilitary, and so I suppose they were meant to express romance. What did they contain? Dens, I guess, maid's rooms, broken furniture, trunks, and they must have been the favorite of hornets. (Cheever, 1980:809)

The "romantic" atmosphere created by the ideology of the "tasteful" consumer society, thus shades all the unsolved disharmonies. Such a world is a delusive and dangerous world. As Cheever describes in "The Country Husband", Shady Hill "hangs, morally and economically, from a thread; but it hangs by its thread in the evening light". (Cheever, 1980:409) Where to go? Can these people "find, in the gathering dark, the path that [they had] lost"? (Cheever, 1980:407)

Quest

Where is the way out for these unhappy people? How to break through the dense fog of simulacra in this consumer society? Cheever, a brilliant writer and also himself a bewildered questioner, tries to present the possible answers in his works.

Cheever, as one of them himself, knew his characters' daily life and also knew their trouble, annoyance and nostalgia for the peace of mind. He knew that his characters surrounded by family, pet dogs, and blooming flowers in their own garden, could not help feeling that there must be a worm in the "rosy apple". Cheever repeatedly told the interviewers that fiction is not autobiography, however, among all Cheever's stories, "perhaps the most flighty and eccentric was the story he told about his own life". (Simon, 1998:288)

Therefore, more or less, the trouble and quest of the protagonists in the stories were also the trouble and quest of the writer himself. There are vitals underlying Cheever's seemingly light and trivial stories. As Wayne Stengel writes in his article, "Cheever [is] anything but a glib writer of *New Yorker* short stories of manners. In *Home before Dark*,[®] Cheever emerges as a consistently brooding surrealist, a writer whose novels and stories frequently return to images of exile, family discord, and disruptive travel. The sense of displacement that these situations evoke haunted Cheever throughout his career. His writing therefore becomes the effort to bridge the gap, lessen the abyss between appearance and reality in both the world he recorded and the life he lived." (Stengel, 1987:223)

Although painful, Cheever together with those miserable

anti-heroes in his stories, never stopped the quest for a possible solution that can lead people out of the deceiving consumer society, enable people to see through the lie of "prosperity", and finally re-endow people with the real happy life.

Cheever's men and women tried everything to search for a way to smash the sense of imprisonment.

Flora, the run-away daughter of the protagonist in "The Ocean", escaped from the warm and conformable middle-class home, although readers can see that the daughter herself did not know what else she could do.

Bertha, the wife of the narrator in "The Fourth Alarm", was also a memorable explorer, though her quest was rather disputable. She gave up her job of "teaching social studies in the sixth grade", (Cheever, 1980:763) and fulfilled herself by performing nude in an "avant-garde" play named *Ozamanides*. Bertha's quest can hardly be called successful. It was unintelligible and unacceptable for both her husband and the writer himself.

Cash Bentley ("O Youth and Beauty!"), a middle-aged "Shady-Hiller" who had been a former track star, always attempted to defy his unmeaning life by running a hurdle race, with the host's furniture as obstacles, after those parties of Shady Hill. Running the hurdle race was an effort to recall his youth and to escape the confinements of middle-class life. Unfortunately, his struggle finally brought him the tragic end. As for the failed quest of Cash, Kathryn Riley argues that "as shown by Cash Bentley's fate, protagonists who attempt to deny reality and to escape totally into a private vision do not succeed when that vision cuts them off from social and personal bonds and responsibilities or from a realistic assessment of their own limitations". (Riley, 1983:21-26)

Another tragic figure is Charlie Mallory in "The Geometry of Love". Charlie, a free-lance engineer facing with problems in understanding his wife, his daily routine and the world in which he was living, invented a "geometry of the emotions", hoping that it could "at least create an atmosphere of solution". (Cheever, 1980:706) This purely imagined method worked satisfyingly just for a while, before its final failure. Mallory, like Cash Bentley, tried to construct a solution against the chaos in his life. He hoped to balance his life with precision and beauty of geometry. A respectable attempt it was, the final failure witnessed the tragedy of the protagonist, because he was never "aware of the necessity to integrate and balance a visionary perspective on life with a realistic one". (Riley, 1983:21-26)

In "The Swimmer", Neddy tried to "escape convention, others' expectations of him, and a sense of the limits of his choices ... [by making] the heroic swim." (Simon, 1998:288) When Neddy finally arrived home, he became weak, lonely and pitiful; he found that his family had left him long ago. However, in the end the swimmer at least began to realize and accept the truth of his life which he had been denying all the while.

Tifty, in "Goodbye, My Brother", was a cynical and pessimistic brother in the Pommeroy family. He, as the much-disliked member,

disapproved of everyone else in the family, of their “corrupted” life style. Tifty’s ultra attitude actually came from his self-questioning of the middle-class way of life: the introspection of the middle class itself. As argued by Scott Donaldson, “ ‘Goodbye, My Brother’ represents an attempt at exorcising the dark brother. But the curious thing about the story is that Tifty almost never articulates the distressing thoughts imputed to him by the narrator, and eventually one comes to understand that the amiable narrator and the depressing Tifty are two sides of the same person. In first draft, Cheever acknowledged, Tifty did not exist—only the narrator. The brother lies within as well as without ... ” (Donaldson, 1990:527-546) Although at the end of the story Tifty did not yet find a way out, the narrator started his journey toward epiphany.

All the efforts of these desperate characters are at least diligent and distinct, although not always constructive. When Cheever was asked why to write, he answered that stories gave him the only way he knew to communicate with people and the world “about my most intimate and acute feelings and apprehensions about my life, about our lives”. (Simon, 1998:288) Cheever saw art as the triumph over chaos. He wrote the survival of the spirit, the redemptive power of art, and the determined will to celebrate both faith and optimism. (Simon, 1998:288) Cheever’s works were his quest: the effort to forge a bridge between the terrible realities of postmodern American life and the remaining aspirations. The writer’s mission was “to counterbalance a frighteningly technological world with structures of hope, imagination, and love”. (Stengel, 1987:230)

Epiphany

Many of Cheever’s protagonists in his stories finally reach the perfect solution through epiphany: the moment in which the miraculous flash of truth enlightens the soul of people. They, through various epiphanies, attain the real happiness with the peace of mind—the spiritual, rather than material, content.

In the story “The Angel of the Bridge”, the inexplicable and irresistible fear that all the bridges in New York will collapse as he drives over them, haunts the protagonist ruthlessly. The hysterical nightmare is driving him mad. As Wayne Stengel comments, “this traumatized protagonist must maintain an almost impossible equilibrium between the terror unleashed by the mechanizations of suburban America and the spiritual vertigo he feels as an individual driven by this society ... His frenzy shows how his own dreams have become nightmares about the ugliness and duplicity of American life.” (Stengel, 1987:229) When “looking at Sunset Boulevard” at 3 o’clock one morning, the protagonist gets some revelation about the reason of his “bridge-phobia”. “And it was at the highest point in the arc of a bridge that I became aware suddenly of the depth and bitterness of my feelings about modern life, and of the profoundness of my yearnings for a more vivid, simple, and peaceable world.” (Cheever, 1980:584-585)

Finally, that Sunday morning, when the protagonist is crossing the Tappan Zee Bridge, an angelic young girl hitchhikes and brings

him miraculous epiphany that finally cures his terror of bridges.

She sang me across a bridge that seemed to be an astonishingly sensible, durable, and even beautiful construction designed by intelligent men to simplify my travels, and the water of the Hudson below us was charming and tranquil. It all came back—blue-sky courage, the high spirits of lustiness, an ecstatic serenity. Her song ended as we got to the toll station on the east bank, and she thanked me, said goodbye, and got out of the car ... I drove on toward the city through a world that, having been restored to me, seemed marvelous and fair ... I wish I could say that I am convinced that there will always be some merciful intercession to help me with my worries ... (Cheever, 1980:586-587)

At the end of the story, Cheever solves the “seemingly insoluble problem ... with almost divine intervention”. (Stengel, 1987:231) Listening to the angel’s ballad, the narrator attains the epiphany, a sudden manifestation of the meaning and essence of life, and thus finds the courage to cross the bridge.

Hake (“The Housebreaker of Shady Hill”) also unexpectedly encounters his epiphany, at the most miserable moment. On the way to the Pewters’ house for another housebreak one night, the protagonist is thinking of his unhappy boyhood, his drunken old father, and his “terrible destiny”; just then a sudden rain comes down.

I wondered what it was until I felt the rain on my hands and face, and then I began to laugh ... I wish I could say that a kindly lion had set me straight, or an innocent child, or the strains of distant music from some church, but it was no more than the rain on my head—the smell of it flying up to my nose—that showed me the extent of my freedom from the bones in Fontainebleau and the works of a thief. There were ways out of my trouble if I cared to make use of them. I was not trapped ... it is the lights and signs of love and friendship [that calls us back from death]. (Cheever, 1980:318-319)

Hake’s trouble is finally solved; with his redemption, he eventually regains the peace of mind.

Similar epiphany can be found in “A Vision of the World”. The narrator for several times mentions his dreamed alien language: “Porpociec ciebie nie prosze dorzanin albo zyolpocz ciwego.” The repetition of this phrase is the process towards a mystical, religious epiphany. During that night, the sound of rain on the palms wakes the protagonist. Through the inspiration of the rain, the narrator successfully interprets that dreamed phrase as “Valor! Love! Virtue! Compassion! Splendor! Kindness! Wisdom! Beauty!” (Cheever, 1980:610-611) These traditional virtues, are Cheever’s ultimate truth as the key to a real happy life in such a vertiginous consumer society.

Family love is another Cheever’s solution that can endow people with real happy life. Ralph Whittemore, the protagonist of “The Pot of Gold” who spent years seeking gold in the commercial

world with the deceiving promise of the so-called "happier life" that obsesses many middle-class families, finally achieves a special epiphany: his wife Laura is the embodiment of the real treasure. (Kendle, 1982:219-230) "Here it was, here it all was, and the shine of the gold seemed to him then to be all around her arms". (Cheever, 1980:139)

Some critics regard Cheever's epiphanic endings of his stories as farfetched and illogical. "In Cheever's stories, his characters typically find deliverance from their pessimism, fears, and anxieties through an unlikely epiphany. There is a sudden spring rain, perhaps; the sun glistens on the lake; a bright wishing star appears in the night sky." (Simon, 1998:288) Meanwhile, such seemingly abrupt endings can be interpreted from another perspective. The trigger for an epiphany in Cheever's stories may be anything—even those most trivial and insignificant things; therefore, the origin of these mysterious but ubiquitous epiphanies must reside in the inherence of people. This inborn property—the tenderness of human heart—probably hides deep; however, through longtime distress and painstaking quest, it is destined to rise, whatever the trigger might be.

Conclusion

Cheever, in his memorable stories, details the life of American middle-class people in a consumer society. These people seem "happy" in such an "affluent" society. But actually their so-called "happiness" is no more than an illusion; the fact is that they suffer a lot from rather than enjoy their suburban middle-class life.

It is the false myth, as a simulacrum, concocted by the ideology of consumer society that hoodwinks these men and women into pursuing an illusive life mode that only refers to vanity and emptiness. These miserable people are thus trapped in a world of hypercriticism and hypocrisy, a world of desire and despair. Baudrillard raises acute and penetrating criticism on the postmodern consumer society that troubles Cheever's characters with abatement and invisible control. But Baudrillard gives no solution in his theory.

Cheever, sink or swim, exerts himself to find a way out for his protagonists. The logic of contemporary consumer society undermines people's peace and simplicity; for Cheever, only the sublime virtues and family love can restore people to the peace of mind, the spiritual fulfillment and the real happy life. In Cheever's world, as long as there are virtues and love remaining in people's heart, they can, however hard it will be, finally conquer various individual plights and predicaments; and can survive the contemporary consumer society, decently. Although the consumer society is full of temptation, labyrinth and melancholy, Cheever believes that the contemporary people, with basic goodness as the

indelible human nature, can find out the way that finally leads them to break through the deceiving myth of consumer society and to attain the real happy life.

Cheever's realistic style and profound reflection present his readers with close-up pictures of contemporary American middle class, their compulsive lifestyle, their spiritual anguish and their final extrication. The world in the new century is even more a consumer society than before, in terms of economic globalization and mass media technology. In this wise, Cheever's theme of people's existence in the consumer society, will remain a general concern.

Notes

- ① Shady Hill, coined by Cheever, is a suburban residential quarter for wealthy middle class people.
- ② Implode / implosion is originally a term of Marshall McLuhan (1911-1980).
- ③ *Home before Dark* is a memoir by his daughter Susan Cheever, published in 1984—two years after John Cheever's death.

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China's Economic Image Construction: A Content Analysis of News Coverage in Wall Street Journal (2009-2013)

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Abstract: This study focuses on China's economic image presented by the news coverage about China's economy in Wall Street Journal during 2009-2013. Applying content analysis, the study investigates China's economic image in terms of news amount, genre, news source, fields, and attitudes. Employing frame analysis as a supplement, the study examines the frames constructed by Wall Street Journal in seven fields. Among these frames, economic rise, product evaluation, corporate mechanism, and science and technology effect are the four most significant concerns in China's economic coverage. The study identifies and analyzed these four frames.

Key words: Content analysis, frame, economic image, economic news coverage, China

Introduction

A latest report released by Pew Global Attitudes Project (2013) showed that China's global image remains more negative than America's. According to the report, a median of 50% express a favorable opinion of China. Especially in the United States, favorability toward China has fallen 14 percentage points in the past two years. Although a majority in the United States (58%) see China as neither a partner nor an enemy, the negative features of China's economic image are prominent: with China's rising economy, people worry about China will replace the U.S. as the world's superpower and many view China's growing military power is a threat to the world. Overall, China's increasing power has not led to more positive rating for People's Republic.

China becomes more and more important to the world economy and ; therefore, policymakers, academics, and the media around the world have paid attention to the implications of China's rise toward peace and stability of the international system. However, most of the studies showed that more than half voice about China is negative. From the content point of view, we can conclude that the international community involved in all aspects of the negative public opinion toward China. "China-threat" theory considered that China's rise of a great power portends a threat to international security, and its rising process often leads to war, mainly because it uses force to change the international order to suit its national interests. "China-collapse" theory always predicted that China will one day collapse because China's economic development is based on the government's financial support obtained from sales of land, mineral and other resources. These suggested that China's economic image cannot be optimistic.

Joshua Cooper Ramo points out that China's greatest strategic threat today is its national image. According to him, China's most important strategic issues, challenges as diverse as sustaining economic growth and the threat of Taiwanese independence, have at their root a shared connection to its national image (Ramo, 2007: 12). In this milieu, Chinese government attaches great importance to national image construction in the international community during recent years. On one hand, by persisting in the policy of "reform and opening", to integrate into the global system, and assume the responsibility of a big country; on the other hand, through publicity, network TV, public diplomacy, Confucius Institute and other multiple channels to communicate and improve the national image. However, people all over the world still feel unfamiliar with China; an epistemic gap between China and the world still exists. Consequently, China's national image has not been fundamental improved.

For individuals, the term "image" connotes "the character projected by someone or something to the public, especially by the mass media" (Webster's II New Riverside University Dictionary, 1984). A country's image usually establishes on the contemplation of himself and somebody else, which Anderson called the process of "imagined community" (Anderson, 2006). Undoubtedly, mass media play an important role in the process of the construction of national image.

This study examines China's economic image by analyzing the economic coverage about China on Wall Street Journal (Eastern Edition) during five-year period from 2009 to 2013. It also aims to analyze and evaluate, from two perspectives of "what" and "how", the image constructed and reproduced by the coverage selected from the newspaper.

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Literature Review

International review

Earlier research of national image focused on the field of international politics and international relations. During the first half of the twentieth century, American image of China is a fantasy created by missionaries' passion and media's misinformation, while U.S. policy toward China is largely built on this image. The incorrect image of Chinese in Americans did not originate from the misunderstanding in the process of learning about China, but the expectation they hope to construct according to their own way they can accept (T. Christopher Jespersen, 1996). From nineteen forties, John King Fairbank wrote many articles about public image and Sino-US relations. Generally speaking, national image research began in nineteen fifties, when the cold war highlighted symbol level of international politics, accompanied by the development of communication technology and change of communication system. Since then, national image application and research enter a new stage. Foreign research on national image was first applied to US-Soviet relation during the period of cold war, mainly serving for the foreign policy decision making (Lei Ding, 2010). Kenneth Boulding (1961) in his book stressed the importance of value system in the process of national image construction, and figured out that mass media has both positive and negative effects to the national image construction.

In nineteen seventies, American scholars had more extensive and profound thinking about the influence of public image exerted to national relationship. With the rise of Sino-US relations, monographs and papers on Chinese national image increased significantly. Those of more influential include "The Heathen Chinese: A Study of American Attitudes Toward China (1890-1905)" (Robert McLellan, 1971), "Progressive and the open door: America and China (1905-1921)" (Jerry Israel, 1971), "Public Opinion and Foreign Policy: America's China Policy (1949-1979)" (Leonard A. Kuznets, 1984), and "Beautiful Imperialist-China Perceives America, 1972-1990" (David L. Shambaugh, 2005).

Though foreign scholars early began to the research of national image application, there is no systematic theory research. Relevant results scattered in various articles and chapters. They use prestige, attractive, reputation, belief system, brand, such as approximation concepts to refer to the national image. Their research were still stuck in the concept definition level, rather than specifying the meaning of "national image".

National review

From 1990s, as economic development, China is playing an increasing important role in international politics. Especially after 2008, with the hosting of Olympic Games, World Expo, study on China's image continued to heat.

Recently, articles and books published on the national image study shows ascendant trend. The earliest work detailed the theory of national image is "national image" (Guan Wenhui, 1999). Later, "International Communication and National Image" (Liu Jinan

(2002), "Communicating National Images" (Zhang Kun, 2005), "Construction of National Image" (Li Zhengguo, 2006), "Positioning and Communicating of Contemporary China's National Image" (Liu Ming, 2006) are also the representative works. Scholars studying on literature also put forward the problem of national image from a cultural point of view, for example: "Discover the Orient" (Wang Yuechuan, 2003), and "Western Images of China" (Zhou Ning, 2006) investigated China's image in the perspective of social imagination, focusing on the cultural explanation to the process of China's image. These works systematically analyzes and discusses the problems of national image theory, historical evolution, image-positioning, image-construction and communication strategy. They found that although the amount of the coverage of China was largely increased, the image of China presented in foreign newspapers and the attitudes towards China didn't change a lot.

From the existing literature, the current research on China's image more concentrated in the U.S. comprehensive print media, such as the New York Times, Times and Washington Post, while less professional media researches. Their research focused on the mainstream media about how to reproduce the overall image of China as a large developing country, while few studies focused on China's economic image.

Methodology

Study design

This study examined China's economic image in Wall Street Journal from 2009 to 2013 via content analysis. It also investigated the frames constructed by Wall Street Journal through frame analysis. As content analysis and frame analysis have mainly been used by mass communication and political researchers, their combination in the study of China's economic image is a significant endeavor.

To create a conceptual understanding of China's economic news coverage in the mass media, content analysis can be regarded as "a research technique for the objective, systematic, and quantitative description of manifest content of communications" (Berelson, 1952). It is used to determine the presence of certain words, concepts, themes, phrases, characters, or sentences within texts or sets of texts and to quantify this presence in an objective manner. For this study, there are two reasons to apply the method of content analysis: First, content analysis, as described by Kimberley Neuendorf (2002), is to describe, infer, measure, and predict. In some topics, like bias, this method can reduce the bias of the communicators than any other methods. Second, it can eliminate the researcher's bias, which is supposed to come from any other qualitative methods.

However, content analysis cannot answer the questions of relevance among variables and the implications beyond the data, while frame analysis can make up for this deficiency. This study employs frame analysis to explain how newspaper discourse represents China's economic image. According to Gitlin, frames can be regarded as 'persistent patterns of cognition, interpretation, and presentation, of selection, emphasis, and exclusion, by which

symbol-handlers routinely organize discourse' (Gitlin, 1980). In other words, to frame is to "select some aspects of a perceived reality and make them more salient in a communicating text, in such a way as to promote a particular problem definition, causal interpretation, moral evaluation, and/or treatment recommendation for the item described" (Entman, 1993, p.52). A media frame is defined as the "central organizing idea for news content that supplies a context and suggests what the issue is using selection, emphasis, exclusion, and elaboration" (Tankard et al., 1991). In this regard, frame can be considered as setting the agenda for news topics, influencing the opinions of participants, and helping people formulate their own frames (or angles, themes or perspectives). As a typical area which foreign media most concern, China's economic news coverage represented integrated forces resulting from a combination of international relations, foreign policy, national politics and culture. Thus, the frames emerging from the news coverage should demonstrate the overall situation of China's economy development as well as the key agendas and their viewpoints.

To determine the image and frames in this debate, news coverage related to China's economy in Wall Street Journal were selected as the study objects. As the most influential newspaper with the biggest circulation in the world, Wall Street Journal is always a barometer of the world's economy. Therefore, its presence of China's economic image should be the representative of the world's mainstream media's attitude towards China's economy.

Data Procedure

Content Analysis

The following are brief explanations of the basic procedural steps in using quantitative content analysis. The steps will be summarized abstractly here. The precise forms which they have taken in this study will be explained later.

a. Formulation of the research question. The research questions for this study, as mentioned before, are variations, features and strategies of the economic image of China, as presented by Wall Street Journal.

b. Definition of Population. The population of this study is all the coverage of Wall Street Journal from January 1, 2009 to December 31, 2013 that contains news, comments or any other articles about China.

c. Sampling. This study follows constructed week approach in sampling content related with China from the leading, largest circulation newspaper Wall Street Journal. The study selects three constructed weeks, 21 days newspaper each year. Then retrieve the articles via title's key words = "China" or "Chinese". By this method the sample is composed of 15 constructed weeks, 105 days newspaper and 334 articles. All analysis in the study was based on data extracted from the sample of 334 articles.

d. Construction of categories. The category in this study can be generalized in these quotes: "A category is a group of words with similar meaning or connotations" (Weber, 1990, p. 37). "A

successful contents analysis depends on the formulation of category" (Berelson, 1952, p.52). Further, the categories are to be developed within the framework of four primary requirements: to fit the needs of the study so that they help to answer the questions originally asked; to be exhaustive (relative to the problem); to be mutually exclusive; and to be reliable (Weber, 1990)

e. Analysis units. Units of analysis are the specific segments of the content that are characterized by placing them into a given category (Ole R. Holsti, 1969). There are three different ways of defining units: physical definition, syntactical definition and referential definition. This study used physical way to define units in terms of their natural or intuitive borders, which means each article about China in Wall Street Journal is the analysis unit.

f. Coding table. Priori coding has been widely used by content analysts when doing content analysis in press. The study analyzed each unit of analysis from four aspects. The study will discuss 7 items later.

Summary (7 items): reporting time, title, length, genre, news source, page position, author identity;

Contents (2 items): field, attitude;

Report strategy: including narrative form and narrative strategies.

Frame analysis

On the basis of content analysis, frame analysis is used to investigate China's economic condition image, including product image, corporate image, science and technology image, etc.

Findings

Overall of the data process

Number and genre of news reports

Number

In total, 334 reports were collected and analyzed, of which 291 stories (87%) were featured in economy, and 43 reports (13%) were politically and military- related. The study took all the 291 reports as object to examine the economic image of China presented by Wall Street Journal. It can be seen that there was a decline trend in coverage about China's economy during 2009 to 2013 from a diachronic perspective (Table 1). In 2009, the number of report about China's economy reached 69. During the following years, it continued to drop to 61 in 2010 and 49 in 2013. However, the average number of reports is 58 per year (about 2.8 per day), which indicated that the newspaper remains a high degree of interest in China.

Table 1 Number of economic report about China from WSJ

Year	Number	Total
2009	69	70
2010	61	66
2011	56	61
2012	56	77
2013	49	54
total	291	334

Genres

Normally, news genre can be divided into four categories: news, story, commentary and news photos. Among the news samples from WSJ, 177 were news (61%), 74 were stories (25%) and 43 were commentaries (14%) (Table 2). It suggested that WSJ “inform” more economic information than to “explain” and analyze China’s economic policy or problems. When reporting China’s economy, the WSJ did not use the art and craft of feature writing which it had been always good at. Although the news samples involved various fields, they lack of deep concern for China’s economy. Some reports were even over-superficial.

Table 2 Genre of economic report about China from WSJ

Year	News	Story	Commentary	Total
2009	44	23	5	69
2010	35	16	10	61
2011	35	11	10	56
2012	34	12	10	56
2013	29	12	8	49
Total	177	74	43	291

Fields

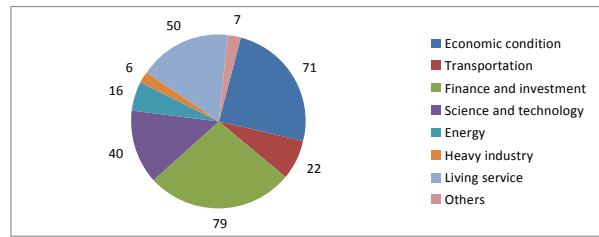
Since 291 news samples were related to more than 20 industries, the study divided those industries into 7 fields for convenience: economic condition, transportation, energy, heavy industry, science and technology, finance and investments, living service. Each type of field contains some industries as following (Table 3):

Table 3 Themes of news reports

Themes	Industries included
Economic condition	Tax, trade, economic policy, etc.
Transportation	Auto, ship, airline, etc.
Energy	Coal, petroleum, gas, electricity and new energy
Heavy industry	Steel, metal ,machinery manufacturing
Science and technology	Network, communication, and new technology
Finance and investment	Bank, currency, stock, bonds etc.
Living service	Foods, estate, medical treatment, retail, education and job, culture and entertainment.

As can be seen from the chart (Figure 1), among the 291 news samples, the top four fields with largest number of reports are: finance and investment (27%), economic condition (24%), living service (17%), science and technology (14%). Comparatively, the numbers of reports in transportation, energy and heavy industry are respectively 22, 16, 6, equaling to the total of science and technology. One of the most interesting finds is that WSJ paid little attention to China’s agriculture or forestry, which belongs to “primary industry” according to the division by Chinese government. The main reason may be that China is in the transition from an agricultural society to an industrial society.

Figure 1 Total number of news reports in different themes



In addition, it can be observed that there was an increasing trend in economic condition and decrease trend in finance and investment respectively from 2009 to 2013, although there were some fluctuations in some years. There was a rise in the number of report in transportation before the number went down from 2011. Meanwhile, the amount of report in energy, science and technology as well as living service fluctuated around 2011, which showed an decrease before 2011 and was followed by a rapid increase over the next two years. The number of report in energy remained stable during the past 5 years (Figure 2 and Table 4).

Figure 2 Trend of news report in different fields from 2009 to 2013

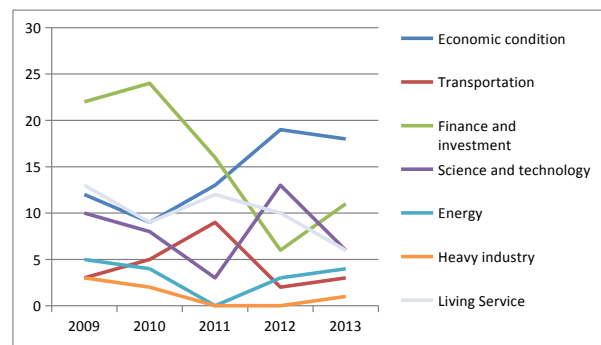


Table 4 Number distribution of different fields

Fields	2009	2010	2011	2012	2013	Total
Economic condition	12	9	13	19	18	71
Transportation	3	5	9	2	3	22
Finance and investment	22	24	16	6	11	79
Science and technology	10	8	3	13	6	40
Energy	5	4	0	3	4	16
Heavy industry	3	2	0	0	1	6
Living service	13	9	12	10	6	50
Others	1	0	3	3	0	7
Total	69	61	56	56	49	291

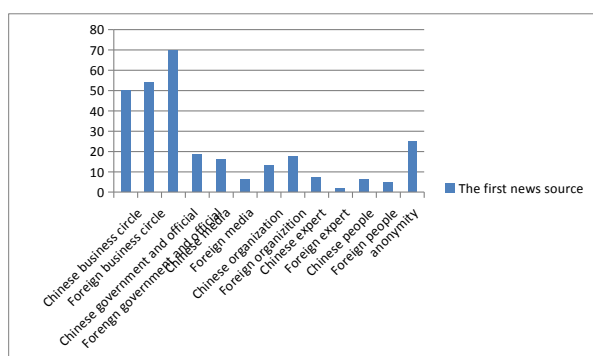
News source

Among the 291 news samples, 56% of all news source, comprising 162 reports, were from China; while 34%, comprising 104 reports were from foreign countries. It is noticeable that WSJ will give priority to Chinese source when reporting China’s economy. Since their reporter stations establishment in Beijing, Shanghai, Taipei and Hong Kong, the three channels: Chinese government and official, Chinese business circle and Chinese media usually became the main news sources. However, using Chinese sources doesn’t mean to agree with China’s points of view. In most cases, sources

from Chinese government, officials and media are quoted as news clues, background or to provide evidence in order to support America's points of view.

The figure 3 shows the overall number distribution of first news source. It is clear that the Chinese government and official account for about one fourth of all news source, which is followed by foreign business circle (19%) and Chinese business circle (17%). One of the most surprising finds is that WSJ is more inclined to use anonymous sources rather than other types of sources, such as experts, organization or ordinary people. Anonymous news sources are generally expressed as "a person familiar with the matter" or "people familiar with the situation". These can be often seen in the field of government-related investment, which make economic reports very delicate.

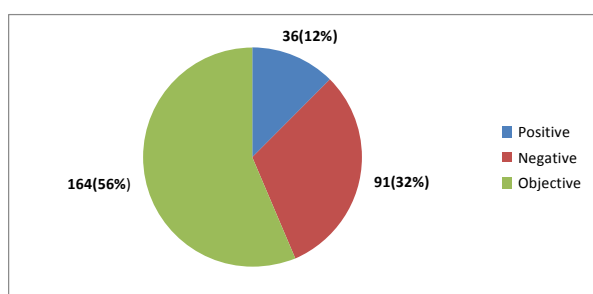
Figure 3 Number distribution of first news resource



Attitudes

As a professional and authoritative financial newspaper, WSJ basically remained objective and neutral in the reports towards China. Among 291 news samples, 164 (56%) were objective, 36 (12%) were positive and 91 (32%) were negative. What deserving additional attention is that negative stood a large proportion, three times the number of positive reports.

Figure 4 Number distribution of report attitudes



Auto, together with science and technology were the fields where positive reports focused. On the contrary, food safety, media control, economy policy restriction and network communication were the main fields which negative reports focused on; nevertheless, WSJ's negative reports were more beyond criticism. It not criticized a certain industry, but usually charged China's political system, human rights, intellectual property protection and other aspects of problems arisen from the industry.

Narrative form and narrative strategies

The 291 samples mainly used three narrative forms: fact-based narrative, bias-based narrative and identity-based narrative. Among 291 samples, more than 85% reports used fact-based narrative. There were four narrative strategies, including commending, charging, satirizing and questioning.

Table 5 Percentage of four types of narrative strategies

Narrative strategies	Commending	Charging	Satirizing	Questioning
Percentage	12%	50%	16%	22%

Overall frame of China's economic image

Concerning attitudes towards China's economy, the WSJ had differing viewpoints and opinions when discussing certain issues. Analysis of the data revealed that there were at least 4 frames for China's economic image, namely *Economic Rise*, *Product Evaluation*, *Corporate Mechanism*, and *Science and Technology Effect*.

The *Economic Rise* frame reflected people's concern about China's economic outcome at the individual, group, local, state and world levels. The *Product Evaluation* frame viewed China-made products in terms of price, quality and safety. The *Corporate Mechanism* frame referred to Chinese enterprise's ownership, policy-making, and relationship with foreign firms and the government. The *Science and Technology improvement* frame was about the achievements and problems in science and technology industry, including the positive and negative impact of improvement on the state and the world. At the macro level, the WSJ comprehended China's economy within economic conditions, product, corporate and science and technology frames. At the micro level, they contained various statements within similar frames suggesting that same frame can be applied to support different attitudes.

Economic rise frame

China is arising. On the theme of Chinese economy, the newspaper affirmed that China played an important role in the world financial crisis and finally recognized China's market economy status. In the coverage, the newspaper highlighted China's continuous growth despite of some fluctuation. They reported that the Chinese government adopted a series of measures to stimulate economic growth in China. Some articles considered China's stimulus "has been one of the few bright spots in the worst global downturn in a generation" (WSJ 16/07/2009). However, they also reported that it is the Chinese government's over-intervention that makes China's market economy more defects than any other western countries. Also, the report argued that the miracle of China's rapid economic growth are achieved at the cost of environment (WSJ 19/09/2011).

China will overtake the United States. The newspaper spending plenty of pages to report China's economic achievements also showed its concern of China's rise. The newspaper argued that with China's rise, "America is seen as on its way to losing its status as the dominant global superpower"(WSJ14/07/2011).The coverage repeatedly mentioned "the reality of the China threat"(WSJ 18/04/2009),since China holds U.S. lots of bonds which "gives

China a tool to manipulate America's domestic and foreign policy-making tool"(WSJ 11/06/2011). In addition, China was described as "hungry, dynamic, scared of failure" (WSJ 13/10/2009). Ironically, when US products are more expensive and become less competitive, Washington say it is the Chinese government's manipulation of its currency.

China's restriction policy is the barrier for foreign investment. The newspaper adopted straightforward wording to describe China's policy for foreign firms, such as "pressure", "sweeten", "squeeze", (WSJ 05/06/2012, WSJ 10/12/2011, WSJ 05/04/2013); while Chinese companies held the "rump card"(WSJ 01/17/2013)from the government. The government usually "props up" (WSJ 11/10/2011) Chinese companies. Further, the newspaper sharply pointed that "increasingly aggressive local authorities are one major issue for foreign companies" (WSJ 19/10/2011).The newspaper spared no effort to report how frustrated foreign firms felt like Wal-Mart, when encountering China's policy restriction. Perhaps these may help us to explain why "China's investments prompt call for new rules" (WSJ 01/07/2013), for they simply want to China follow the rule of game established by their own.

Product evaluation frame

Chinese products' quality problems frequently occurred. The data showed that more than 20% negative reports were about China-made products, indicating that the WSJ paid close attention to China-made products during the past five years. According to the analysis, food, software, infrastructure were the top three "harder-hit area". Among those fields, safety was an issue they were most concerned. The newspaper usually expressed their concerns about the quality of Chinese products through the ordinary people's experience, which generated widespread suspicion on Chinese products in the world. For example, a report about Chinese dry wall quoted a house owner's words, by saying that 'my biggest fear is we'll be stuck with a house we can't sell' (WSJ 12/01/2009). Another issue they cared about was counterfeit products. The coverage reflected that "fakes remain a problem" (WSJ 14/02/2012), though China has made efforts to step up its fight against fakes. Moreover, piracy was also an important part which WSJ concerned a lot. In a report, China was described as a big piracy country and software piracy had been "a cause for disagreements on performance expectations" within Microsoft's ranks (WSJ 14/04/2012). Coincidentally, videogame companies and investors also discovered that "a slow-moving bureaucracy and rampant piracy remain significant hurdles" (WSJ 03/03/2010).

Chinese products are more expensive. The newspaper unabashedly complained that "made in China is getting more expensive" (WSJ 11/08/2012). When discussing the reason, the newspaper firstly pointed out that yuan's appreciation was the culprit, which given "the majority of China's exporters compete on price" (WSJ 11/08/2012).However, there had been some rational analysis of this issue. The newspaper argued that rising wages, sluggish demand as well as the stronger yuan caused a dilemma to Chinese factories (WSJ 11/06/2013).Compounding woes, "China's labor supply has been integral to its breakneck growth"(WSJ 22/11/2013), which can push up labor prices and make it tough for China's export factories to compete.

Corporate mechanism frame

Getting more competitive. Most news coverage had claimed that Chinese corporate became more competitive in the global market connected with risen profit and overseas expansion. The competition, which was portrayed as "buying sphere", had changed from the "negligible amounts" in the past to "400 companies located outside of the country" (WSJ 24/01/2011).Some articles suggested that the expansion "have the potential to reshape global trade and investment flows" in coming years and "are already creating anxieties" (WSJ 07/06/2011) in some foreign countries. The newspaper also stepped beyond the vocabularies of mergers and acquisitions, and accounted that most expansion were "encouraged by the government" (WSJ 07/06/2011); therefore, "private wealth is an offshoot of the country's economic expansion" (WSJ 11/11/2010, Two Chinese Firms Jump After Strong IPOs).

Untrusted corporate . The news coverage also reflected people's distrust of Chinese enterprises. There are two reasonable drivers behind this phenomenon. First is the relationship between Chinese enterprises and the government. According to the coverage, "Chinese state-owned enterprises serve two masters: the Communist Party and private shareholders" (WSJ 07/01/2013).Usually, the government has "direct controls" (WSJ 14/03/2013) for the real-estate sector or banking sector -- like raising down-payment requirements -- and the strength of some controls could be increased in special period. They kept a close relationship with governments in terms of ownership structure, transparency, decision-making, so that "some leaders carry on longtime allegiance to state-owned enterprises even as they assume government posts in which they oversee the companies"(WSJ 14/11/2013). Even private companies also labeled as the representative of Chinese government due to different political system and culture. This would be the weakness of Chinese enterprises the newspaper generally attacked. Some articles even set up barriers to prevent Chinese enterprises from overseas mergers and acquisitions. Second is that, to some extent, Chinese enterprises were lack of social responsibility. Analysis indicated that Chinese enterprises faced some problems: endanger state security, integrity crisis, pollution, violation of labor right. For example, a Chinese shipping company was reported to withhold payments, which gave a signal that Chinese corporate had low-integrity (WSJ 18/11/2011); Foxconn Factory was reported to use 14-Year-Old Worker (WSJ 17/10/2012), alleging violations of labor rights. And some chemical companies emphasized more on rapid economic growth and industrialization than environmental protection (WSJ 19/09/2011). Moreover, some reports were inaccurate. Huawei company- a Chinese telecommunications- equipment maker, was presented to "provide services to government-controlled telecom operators"; therefore, "Iranian police using mobile-network technology to track down and arrest dissidents" (WSJ 10/12/2011). In fact, this is seriously inconsistent with the fact that the company only produced civilian communication equipment, which is not supposed to endanger national security.

Science and technology development frame

Looking at the news coverage of China's science and technology, the newspaper highly praised the achievements, but still paid special attention to the negative effects. The media coverage for

science and technology development frame peaked at the discussion about censorship in network, communication and IT companies. It varies with the advance of technology. The online censorship, which was portrayed as “Dam”, “stone wall” and “crackdown”, is likely to censor “political speech, stores screenshots of users' computers and has the ability to shut down non-Internet applications if a user is typing something it doesn't like” (WSJ 01/07/2009), even without the Green Dam censorship, China manages to block full Web access, “China manages to block full Web access” (WSJ 11/01/2010). Obviously, using censorship issues to attack China's human rights is a common trick. Another issue is information security. The media coverage for cyber attack peaked at the beginning of Sino-US network confrontation. The coverage considered that “hackers operating from China -- both government-affiliated and private-sector -- are the world's most "active and persistent" perpetrators of industrial spying” (WSJ 14/02/2012), which reveals that China's science and technology development is a threat to the world's peace.

Conclusion

This study applied content analysis to the study of China's economic image presented by Wall Street Journal. The focus was on the economic news coverage about China during 2009-2013, representing a mainstream view in the international community on the background of China's peaceful rise through a professional and authoritative newspaper. The study pointed out the seven fields showing the area which the media concerned most. Through Goffman's (1974) frame analysis, four frames were identified: Economic Rise, Product Evaluation, Corporate Mechanism, and Science and Technology Effect were the most significant concerns. In this regard, this study makes at least one contribution to the field of national image: it demonstrates the necessity of a content analysis combined with frame analysis approach to the national image construction at an intercultural level. Through the analysis on the western media coverage of China, we can not only discover the existing economic problems in the process of China's development, but also understand the interests and areas which western media most concern to China. Thereby we can draw the westerners' overall view about China's economy.

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A Comparative Study on Chinese and Western Architectural Culture From the Perspective of University Humanistic Education

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Abstract: Through the teaching of Humanities and social science teachers and lectures, reveal the essence and difference of eastern and Western architectural culture, upgrade Student 's aesthetic cognitive ability and aesthetic judgement level by the professional arts education, broaden colleges students 'vision of Humanities , which will be widely appreciated by the students. Architecture is a comprehensive art and a solidification of the epic. At all times and in all over the world, architecture is a kind of space culture form of human material civilization and spiritual civilization. Architecture expresses some certain outlook on life, world and aesthetics, thus, it is a comprehensive reflection of both the characteristics of the times and the concentrated expression of national culture. The difference between Chinese and Western architectural forms is the performance of cultural differences. It reflects the differences between physical and natural environment, social structure and morphology, thinking modes as well as the aesthetic realms. This thesis, based on expounding characteristics and development of Chinese and Western traditional culture and architecture, conducts a comparative study on Chinese and Western architectural cultures through construction material and structure, artistic style and architectural composition. At last, background analysis of differences between Chinese and western traditional architecture has been covered too.

Key words: Humanistic education in universities, architectural culture, comparison

Introduction

Through the teaching of Humanities and social science teachers and lectures, reveal the essence and difference of eastern and Western architectural culture, upgrade Student 's aesthetic cognitive ability and aesthetic judgement level by the professional arts education, broaden colleges students 'vision of Humanities , which will be widely appreciated by the students.

Architecture and our lives are closely linked. Building can not be dissociated from its environment, and therefore it intuitively reflects some characteristics of the zone and era. U.S. educator Professor Sang Park (年代) said “ All the great buildings, their significance not only lies in bearing the weight of the basic functions, but surpassing the practicality to convey the spiritual pursuit of human in the society in the way of visual construction materials. They are a mirror of the times. The mode of production and life in that era and the aesthetic sentiment as well as the social status of the time can be reflected even from the ruins.”

This thesis can be divided into 4 parts. In chapter 1, Chinese and western traditional culture and architecture as well as the Chinese and western construction and cultural development and blend has been covered. In chapter 2, differences between Chinese and western traditional architecture have been expounded from the aspects of construction material and structure as well as artistic style as well as architecture composition. In chapter 3, background of differences between Chinese and western traditional architecture has

been analyzed based on different nature environment and social space-time environment. Then, the last comes the conclusion part.

Culture and architecture

It is universally acknowledged that architectural culture is an important part of a nation's culture in history. It may reflect a nation's achievements in various aspects, such as the artistic achievements, the development status, and a nation's civilization degree etc.

Chinese traditional culture and architecture

Chinese traditional architecture has shown a great accomplishment in art, and it has represented our country's high achievement of architecture. With the development of international economy and the continuous strengthening of global communications, Chinese modern and contemporary architectures have been greatly influenced by Western architecture. And our traditional ancient architecture is becoming more typical than the architecture in any other periods of our nation. Meanwhile, with the development of world economy and the increasing pressure from the international communication, Chinese contemporary architecture is becoming more and more westernized. Thus, it is quite necessary for us to do a comparative study on the Chinese and western architecture culture. .

Western traditional culture and architecture

Western architecture often with great volume and scale emphasizes the transcendent, eternal and noble art of architecture.

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They have strict geometric solid, often with a sense outside of the dome and minarets sheets to render the vertical housing efforts to form a stand proudly, and the natural antagonism of the appearance. By representatives of architectural culture of ancient Egypt—the pyramids and temples, we highlight the performance of this feature. The pyramids of Egypt are the noble's tombs. The ancient Egyptians believed in the concept of immortality of the soul, which is through the permanent preservation of the body after death, you can obtain eternal life in heaven. Thus, during the lifetime of the Egyptian pharaohs were representatives for their eternal faith of the pyramid construction.

Chinese and western construction and cultural development and blend

Architectural Culture is in the global “Big Culture” system, and the architectural culture of all nationalities, all regions living and prospering together with each other have composed the world's architectural culture Symphony here. Social process of globalization has brought the cultural communication with a rendezvous, conflicts and blend.

For thousands of years, China is influenced by foreign cultures for a long time. Buddhist culture has originated from India. As Zhang Qian serving as envoy to the Western Region, Master Xuan Zang in Tang Dynasty went to India to learn their experience, then Buddhism has influenced China for 2,000 years. However, the contents of Buddhism, the looks of Buddha and the shapes of Buddhist temple blend into Chinese cultures, and some culture has been formed and developed to a unique Chinese Buddhist architecture culture.

In the early 1920s, the modern Chinese architects returned from studying abroad, most of whom are scholars in the United States and influenced by both cultural concepts of Western academic architecture and nationalistic Culture concepts of Chinese traditional architecture, emphasizing cultural fusion between Chinese and western architecture focusing on the architectural style, creating a new era of cultural fusion between Chinese and foreign construction by designing a number of high-quality constructions for the first time creatively. For example, the Zhongshan Memorial Hall in Guangzhou, Sun Yat-sen Mausoleum in Nanjing and so on, designed by architect Yan zhilv, from the first batch of scholars studying in the U.S in the 1920s, who had caused an uproar in the Chinese construction industry and pushed the integration process of the Chinese and foreign architectural culture .

In the early founding of New China, the Chinese government mechanically copied the Soviet model. Because All over China build a batch of construction of the Russian cultural characteristics Chinese architectural culture of “socialism” has been formed and developed during 50s. Since China's reform and opening up policy, China opened its doors again to the introduce western economic management model and imitate “European style”, which makes post-modernism almost sweep the country, resulting in the formation and development of “reform and opening-up” construction culture.

It goes without saying that architectural culture of all countries in the world is restrained to local political systems, economic conditions, technical level then and there. As a result, mutual exchanges, influence, emulations and integration of different architectural cultures step up. However, what kind of fusion and exchange can stand the test of time and space with vitality? Only those who learned the essence of eastern and western cultures and then integrated into the architectural culture of their own national character have great vitality.

Differences between Chinese and western traditional architecture

Construction material and structure

The first distinction should be on the building materials. In ancient times, Chinese architects used wood as the main building materials while western architects used masonries as their main materials. The primitive agriculture and traditional agriculture have taken dominant places for a long time in the past of our country, which are quite different from the western traditional economic mode in the same period. The different building materials can reflect the western material culture and philosophy differences. From the perspective of building materials, before the birth of the modern architecture, almost all the building systems which world has developed, including those buildings belonging to the East Indian architecture, basically, were created by using brick and stone as the main construction materials, which belong to masonry structural systems. For instance, Egypt's pyramids, the ancient Greek temples, Roman Colosseum, aqueduct, and medieval churches in Europe are all built with stone without exception. Only in Chinese classical architecture (including the nearby Japan, Korea and other regions), wood is the material of the main framework of a house, which belongs to the wood structural system, thus known as “history of wood.” The selection of materials between Chinese and western architecture, in addition to the difference due to natural factors, is mainly the result of different cultures and different ideas, reflecting the different mind in buildings.

Western-based approach to the primitive hunting economy, has created a mentality of the original weights. From the westerners' affirmation of stone, we can see that their spirit of seeking the truth and wisdom. In the relationship between human and nature, they emphasize that human is the master of the world, and the power and wisdom of human can conquer anything. Derived from agriculture-based economy, China has developed the traditional Chinese philosophy, which advocates a kind of value that man is an integral part of nature. This value is a revelation of the relationship between man and nature, reflecting that people are a part of nature.

The thought of group harmony is the characteristic of Chinese architectural aesthetics, and also the unique idea of Chinese architecture. Therefore, Chinese architecture mainly focuses on horizontal development, as to weaken the highlight of the individual architecture greatly. This kind of layout became dominant depending

on the overall momentum of the symmetry, concert and good order among groups instead of the modeling of individual architecture. Chinese people have surprising control ability over the architectural groups.

Artistic style

In terms of architectural style, the roof of Chinese classical architecture generally has obvious curve, which has a steep slope on the top and a steep flat slope on the bottom in order to drain easily and have good ventilation. In the building which have Xieshan Ding or Wudian Ding, rooves are intended to make slight increases on both sides, especially warping in the corner part in order to form the artistic conception of flying wing angles.

Comparing with Chinese classical architecture, carving in Parthenon, a typical example of western classical architecture, had the reverse curve with the Chinese classical architecture eave. It made slightly convex curve in the middle of the entablature. The convex curve of the western architecture produced a straight flat artistic effect.

Western classical architecture column's style has obvious Talus and entasis. More techniques are found in Greek classical architecture columns such as bolding corner-post and side foot.

The ancient Greek architecture pursued plastic arts, and each building seemed to be a sculpture. They pursued harmony and considered that human body was the most harmonious and beautiful shape in the world. The physical beauty is well reflected in their architectures. For instance, the Doric order represented male model is resolute and magnificent. The Ionic order represented female model is gentle and graceful.

Architectural composition

The layout of architectural space reflects the Chinese and western differences of system culture and character trait. From the space layout of the building, Chinese architecture is the spatial pattern of closed groups, spreading out on the ground plane. Whatever building in China from dwelling house to palace, almost has the pattern, similar to the "quad" mode. The beauty of Chinese architecture is a kind of "collective" beauty. For example, Beijing Ming Palace, Ming Tombs and Temple of Confucius in Qufu are huge buildings formed by numerous court yard encircled layer upon layer. The various buildings around are arranged regularly, reflecting the introversion character of social structure, patriarchal ideology and ethics system in ancient China.

In ancient Chinese architecture, there always showed the well-fortified hierarchy from the layout, dimension, structural units, architectural ornaments, building materials to the city size, even the road width, etc. The strong hierarchy regulations are filled with everywhere. Even some relative laws and regulation are involved

In contrast to China, western architecture is the spatial pattern of open monomer to high altitude development. Compare the expansion of the Palace Museum with the Louvre in Paris built in the 1960s. The former is composed of thousands of individual houses, magnificent building groups around the axis to form a series of

courtyards with the plane spreading unusually large; the latter applies the method of scaling up "volume" and vertical stacking, forming towering, magnificent whole from the vast and varied body. The reason is that the westerners paid more attention to the religious buildings. In the ancient buildings, the religious buildings often represent the top level of the architecture at that time. The designers applied the vertical space sequence and upward straight form to express the people's worship to the God and the eager yearning and infatuation to the heaven. The westerners paid less attention to the secularity and authority than the Chinese, but paid more attention to the God in their minds. They established many immortal temples and churches with the best materials and techniques.

Background analysis

Nature environment

Different regions certainly have different natural environment such as topography, Sun Angle, tides, currents and winds, temperature, air pressure, food, land, water, vegetation and so on. As a medium between man and nature, construction should be conducive to forming the external environment outside and should be conducive to protecting the indoor environment of dwelling inside. These buildings put down roots on their own environment like plants, matching the weather land utilization, meeting the request of the natural environment of the region, merging into an integral whole with great universe.

In Southeast Asia and South Asia, where there are dense coconut groves and hot weather, people build tropical rain forest constructions such as Thatched houses and logcabin with palm leaves and coconut palm leaves which are well-ventilated, cool, light and simple.

In Central Asia, West Asia and the west alpine region of China, people build flag stones construction nestled among hills with stones, which can take shelter from the wind, keep off the snow, keeping the house warm and insulate against the cold. For instance, ethnic minorities in Tibet, Qinghai and Sichuan build a wide variety of plateau area buildings on western mountains in the western parts of China.

In the loess plateau of China, the north of Gobi, because of low rainfall and dry climate, people build earth construction possessing distinct features by using the hillside and slopes. The Art Exhibition Hall in Gansu Dunhuang buried in the hillside is one of the earth constructions with very obvious construction features like the semi-open entrance, retaining wall and pass-way.

In the eastern part of the United States, Australia, and the Southern part of China, according to local conditions of humid air and mild weather, people build slope-roof buildings with wood and brick in order to shelter from the rain and keep the house well-ventilated.

These constructions have a variety of forms and different styles which are suitable for different natural environment, forming their unique architectural culture rooted in natural environment with the

landscape, vegetation and terrain together.

Social space-time environment

Architecture is not only the precipitation of human civilization, but also the carrier of human civilization. It reveals the ideological concept, religious feelings and aesthetic interests of all peoples in all regions to us with its distinctive language expressions.

Different regions, countries and nations have different social and historical patterns. European countries, American countries and other developing countries in Asia and Africa, have different religious beliefs, economic status, cultural customs of the different regions. The difference of particular space and environment in different parts of human society result in the architectural culture's space-time quality and diversity, therefore forming in ancient or modern Chinese architectural culture, the Russian architectural culture, architectural culture in Southeast Asia, Europe and the United States architectural Culture, the African architectural culture and so on.

Ancient Greek architecture in Europe, the ancient Egyptian architecture in North Africa, the ancient Indian architecture in the South Asian and ancient Chinese architecture are the historical origin of world's ethnic architectural cultural history. The formation and development of religions such as Catholic, Protestantism, Hinduism, Islam, Buddhism and so on, not only cause a profound impact on the religious countries and regions, but also influence deeply on the constructions of those areas, forming a rich and colorful culture of religious architecture.

Conclusion

The causes for the distinctions between Chinese traditional architecture and western architecture are manifold. The different social systems, different cultural mentalities, different ruling ideas,

or even the different religious thoughts, etc. can be the causes of the distinctions. For the various factors, the styles of Chinese traditional architecture are closer to nature, while the western styles tend to be more individual-oriented. But they are all for a better life. No matter what, with the high development of our modern society and the prosperous achievement of our modern communicating system, we can not avoid the globalization, so our life style, spirit pursuit and our culture atmosphere have to be effected to some degree. Every coin has two sides. Our life needs some new blood, and it is a good chance for architecture to be represented as a new face. We are pretty sure that the world is a big container, and all the differences can exist peacefully and gorgeously.

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A Comparison Between Li Renlao and Tao Yuanming's Personality Spirit: Based on Returning Home

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Abstract: Both Tao Yuanming and Li Renlao are away from the official career and live in seclusion. The difference is that Tao Yuanming's "Returning Home" is the realization of his dream. So, he enjoys his pastoral life, farming, drinking, inditing, and admiring the scenery, which show his life realm of merging with nature; however, for official career frustration, Li Renlao's "Returning Home" is for he has no other choice. To distract from the depression, he takes philosophy thought of Lao Zi and Zhuang Zi as life credo, cultivating his moral character, letting spirit tour, to remove external tiring things.

Key words: Tao Yuanming, Li Renlao, Returning Home, personality spirit

Introduction

Tao Yuanming's "Returning Home" (《归去来兮辞》) is a mortal and famous work in Chinese literature history. Ou Yangxiu once praised: "Tao Yuanming's "Returning Home" is the best article in Jin Dynasty." Later, Su Shi created "Reply to Returning Home" (《和归去来辞》) which is the earliest "poems of learning Tao yuanming" ("和陶辞") in China. In the middle years of Goryeo Dynasty, Su Shi's poems spread to South Korea and become fashionable for a time, appeared a grand occasion that "Good article will be popular at the time, but no one is as popular as Su Shi's". Li Renlao imitated Su Shi to create "Reply to Returning Home" (《和归去来辞》) which become the first "poems of learning Tao yuanming" ("和陶辞") in South Korea. After Li Renlao, "poems of learning Tao Yuanming" in South Korea emerged in an endless stream, up to 127. The works centered about "Reply to Returning Home" was more than 400, most of which took Tao Yuanming as a model. Tao Yuanming's "Returning Home" and Li Renlao's "Returning Home" are pioneers in China and South Korea separately, showed poets' personality spirit.

Why are They Returning Home?

According to records of history books, Tao Yuanming is as official twice, be a hermit twice in his life. The first time was because his parents were old aged and family is poor, Tao Yuanming had to be served as state libationer. However, he was unable to bear the duty, asking to leave not for a long time; the second time was he resigns from an official position of Pengze county magistrate, then created "Returning Home". In 405, Tao Yuanming was 41 years old,

he took office in August, resigned from an official position to live in seclusion in November. "Preface of Returning Home" records the reason why he is served as an official: "My family is poor, farming and planting mulberry aren't enough to sustain life. There are many children, but no surplus grain, I haven't found the skill to support my family's life. Most friends advise me to go to work as an official, I also have this idea, but lack of opportunities. It happens to send officials to some other places, local officials take cherishing talents as a virtue. My uncle also helps me because my family is poor, so I'm appointed as a official of a small county. Then the society was turbulent, I was fear of being sent to distant place as a official. Pengze county is one hundred miles away from home, the harvest of grain is enough to make wine drink, so I ask to go there." However, Tao Yuanming "has read lots of books, known men of moral integrity, did not dare to compare with lofty moral character, just wanted to keep the poor for integrity. Tao Yuanming upheld the principle of "gentleman poor" integrity, even if there were many reasons to be as an official, it would disappear for his nature. Soon, Tao Yuanming resigned from the official position and back home. There are two reasons for his behavior. Firstly, "his nature is integrity, not extremely unnatural and affected". Because his official work was to solve the problem of food and clothing, which was contrary to the nature of himself, he wanted to break the shackles, get self liberation, be a hermit. Secondly, his sister died in Wuchang (Echeng County of Hubei Province), he was sad and hoped immediately go to the funeral. Tao Yuanming and his sister really felt a lot for each other, grow together from childhood, he was with grief for his sister's death. It was naturally to Put down everything to condole his sister.

There was no clear record about the time of Li Renlao's

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resignation, seclusion and creating “pomes of returning home”. “History of Korea•biography of Li Renlao”: “Li Renlao.....clever since his childhood, good at writing and cursive script.....Li Renlao made good friends with famous scholars Wu Shicai, Lin Chun, Zhao Tong, Huangfu Kang, Li Zhanzhi, and Xian Chun despite their age difference. They enjoyed themselves by poems and wine, just like seven scholars of Jiangzuo. In emperor Shenzong period, he was an official of The Ministry of Rites. In the early years of emperor Gaozong, he was an official in charge of discussion. Li Renlao died when he was 69”. Li Renlao was born in 1152, but Zheng Zhongfu’s revolt happened in 1170, he was not an official, so there was no problem about resignation and seclusion. In 1880, Li was 29, he was an official. In 1194, Li was 43, he is no longer working for bureau in charge of writing and preserving historical records. In 1197, Li was an official of Ministry of Rites. So, where was Li Renlao during 1195 to 1197? According to “Li Renlao made good friends with famous scholars Wu Shicai, Lin Chun, Zhao Tong, Huangfu Kang, Li Zhanzhi, and Xian Chun despite their age difference. They enjoyed themselves by poems and wine, just like seven scholars of Jiangzuo. It could be known, Li resigned and lived in seclusion during those three years. “Reply to Returning Home” should be created in 1195 when he prepared to resign, then he was 44.

Li Renlao’s resignation and seclusion had main relationships with political environment of that time. Emperor of Yizong period, attached great importance on civil official but not military officer. In August, 1170, Emperor Yizong asked official in feudal times to drink wine, when drinking happy, he ordered military officer to fight for entertainment, which inspired anger of military officers and led to rebellion of Zheng Zhongfu, Li Gao, Li Yifang etc. After that, Zheng Zhongfu etc. chose Wang Hao to be their emperor, who is emperor Mingzong. When Wang Hao become emperor, he appointed Mingzong Zheng Zhongfu, Lu Yongchun, Liang Shu to participate in political affairs, Li Gao as General Wei Wei Qing (official name of ancient China), Li Yifang as General Dian Zhong Jian (official name of ancient China). “There were many other military men be promoted.” Until then, military officers were in power, civil officials were persecuted constantly, some of whom were killed, some were exiled. Li Renlao was a civil official, who was naturally to be a thorn in the flesh of military officers, and had a difficult time. What’s more, powerful minister came into power one by one. They sold official position, didn’t respect the laws of an imperial court. Li Renlao was tired of these. In order to keep himself safe and far away from dirty officialdom, he decided to resign and to be a hermit.

From the above, Tao Yuanming’s “Returning Home” was created in his second seclusion, then he was 41; Li Renlao’s “Reply to Returning Home” was created in his first seclusion, then he was 44. As the reason for their seclusion, Li Renlao’s seclusion was

affected by political environment at that time. Military officers were in political power, killed plenty of civil officials, Li Renlao chose to live in seclusion for his safety. It was passive seclusion. Although Tao Yuanming was affected by political environment at that time, it was not the main reason for his seclusion. Tao Yuanming lived in seclusion for two times, both were active seclusion. According to “Southern history•bibliography of Tao Yuanming” : “Jiangzhou Cishi (official name) Tan Daoji went to visit him, Tao Yuanming was in bed several days because of hunger. Tan Daoji said: ‘Sage will live in seclusion when imperial court is corrupt, go out to be an official when politics enlightened. Now you live in a golden age, why you spoil yourself so much? Tao said: ‘I don’t dare to act as a sage, my ambition can’t compare with theirs. Then Tao Yuanming threw away the food and meat Tan Daoji gave him.’” From these, it could be known Tao Yuanming was not interested in being official. However, Li Renlao was keen on official career, he “worked as an official for 30 years, hovering in the office, his beard and hair were white”.

Tao Yuanming’s influence on Li Renlao

Li Renlao’s seclusion influenced by Tao Yuanming to a certain extent. Just as he said: “Tao Yuanming once lived in seclusion, so I’m also to live in seclusion.” Li Renlao admired Tao Yuanming extremely, he said in his “Wo Tao Xuan” (《卧陶轩记》): “Tao Yuanming lived Jin Dynasty, nearly a thousand years earlier than me. I don’t know his language, never see his appearance, but I know him and familiar with his character from books.” He directly pointed out that although Tao Yuanming lived a thousand years earlier than him, never saw Tao’s appearance or heard his voice, he felt they were close when read Tao’s pomes. Li Renlao said there were three aspects he can’t match Tao Yuanming. The first is Li’s poems can’t match Tao’s; the second is Li can’t match Tao’s free and easy attitude of “won’t bow and scrape for five pecks of rice (the regulation salary of a magistrate)”; the third is Li’s exemplary conduct and nobility of character can’t match Tao’s. The main reason for Li Renlao admiring Tao Yuanming is that Tao has realized his dream and hope of secluding in Li’s subconscious.

Li Renlao read “Peach-Blossom Spring” (《桃源记》) repeatedly after he happened to read it. Then he imitated the wonderland in “Peach-Blossom Spring”: “There is a wide and flat land, neat rows of houses and fertile land, beautiful pond, mulberry, bamboo plants and of this kind. Field trails crisscross, a few dogs are barking and some cocks are crowing one after another. People who come and go to work in the fields, dress up like the people outside. The old and the young are living a peaceful life” to create Qingquedong 《青鹤洞记》: “The road is very narrow, can walk only one people a time, after several miles walk with proneness, get to

open places where there are fertile lands, plenty of trees and scenery of mountain fold ridge just like match each other, many streams rush, bamboo fences and hay-thatched mud cottages, peach and apricot trees, which is out of the world." For Li Renlao admired Tao Yuanming's personality and poems, he imitated Tao's way of doing things. Tao Yuanming's seclusion triggered Li Renlao's idea of seclusion.

Different Realm of Life

Li Renlao's "Returning Home" and Tao Yuanming's "Returning Home", both aim to express seclusion will. In form, The syntax and rhythm of the two poems are basically the same (Li's poem has more two sentences than Tao's; the last word of every sentence is the same except one sentence in Li's poem and Tao's poem), but shows different personality spirit.

In terms of emotional tone, Tao's poem is full of pastoral joy, filled with relaxed feeling of relief from shackles. "Finally I see my humble house and happy to go forward. The servant come out to meet me with joy, children has already waiting at the door." These show his excitement of getting home, and the joy of servant and child for his returning home. "Take the wine himself, drink it himself, look at the trees in courtyard, he is very happy." These described the scene Tao Yuanming had just returned home, he took the wine to drink himself, enjoyed the pretrial flowers, could not help but face beamed with joy. "Listen to the intimate words of friends and relatives makes me happy, to play qin(a musical instrument) and read books to delight me and eliminate my sorrow." These show Tao was happy to chat with his friends and relatives, to play musical instrument and read book. From these, it can be seen that whether on his way home after resignation or return home, or life of seclusion, Tao Yuanming enjoyed his life deeply. The poem of Li Renlao shrouded with sadness, which showed Li's loneliness. "Shake hands and pledge just now, then every is changed" expressed Li's laments on rapidly changing political situation, showed helpless melancholy. "Take fallen chrysanthemum as food, broken lotus leaf as clothes" was the description of seclusion. "fallen" and "broken" expressed Li's down and out, and sorrow incisively and vividly. He took two allusions to show although he is Jiangshi, Boya, he has no confidants like Yingren, Ziqi, his loneliness is vivid.

Both two poems are about seclusion, why one expresses happy feeling, the other expresses sad feeling? Because Tao Yuanming "like quiet life, miss quiet life day and night, but he can't pursue it for social environment then." Tao Yuanming pursuits a quiet life with drinking, farming, reading and playing musical instrument, but regret for his dream can't be realized. Resignation is the realization of his dream, he is happy and his poem is with free and easy feeling. Although Li Renlao lived in seclusion, he had never forgotten the

secular world, he was not willing to give up the official world and couldn't bear loneliness. He wanted to keep himself safety, then he had to leave officialdom, because "a man's mind is unpredictable" so "fear of going to the society" The contradiction between ideal and reality and seclusion under duress, make Li sad, his poem is with a desolate feeling naturally.

On returning interest, Tao Yuanming "On a cane to walk alone, always look up the sky; The clouds have no idea to go out of the mountains, birds fly tired and go home"; or "The farmer told me the spring had come, they would go to the west farming fields to farm"; or "Taking advantage of the good times of Spring, to go out alone, sometimes put down the stick, pick up tools and weeding and hilling. Climbing up to the eastern highlands, shout loudly, created poems in front of clear water." "Li Renlao's returning is "to think unattainable and fantastic things in quiet room, plant panacea in fertile land"; or "drink to release sadness and poetize to express his interest." It proved after returning, both Li Renlao and Tao Yuanming drunk and poetized. The difference was that Tao Yuanming could get happiness from drinking wine and composing poetry while Li Renlao just to distract the dreary utilitarian purpose; the main activities of Tao Yuanming were farming, watching flowers, while main activities of Li Renlao were enlightenment and cultivation of moral character. After returning, Tao Yuanming would walk in the park on a cane every day, if tired, he would rest in situ, lift up his head to look at the clouds, and the returning birds. In the farming season, he would plant together with the farmers till the sunset. Sometimes he would climb up to the hills to shout loudly, and poetize near the clear water. Tao Yuanming integrated into countryside, landscape, and vegetation, everything in the nature was indispensable part of Tao's life. Tao's quiet and simple character, and tranquil bosom casted beautiful reflections with all natural sceneries. After returning, Li Renlao sat every day, "think of things a thousand years ago" travel with every thing with no barrier, he won't back to reality until enjoy himself to the full. Sometimes Li Renlao sat in a room, with his heart pure, without desire, his mind went every where; sometimes he went to the fields to plant panacea, in order to live immortal. Obviously, the interest of Tao Yuanming was integration with nature while Li Renlao's was travel with fairy.

On life attitude, Tao Yuanming's is to "follow the nature until the last moment of life, obey fate with peace in mind, without regret?"; Li Renlao's is that "world has its time, I like to act as Jia Huli(a person's name)". Both Tao Yuanming and Li Renlao had the idea of obeying the nature and arrangement of fate. However, there were differences between them. Tao Yuanming's thought is "Wealth is not what I expected to get, and the living palaces in the moon is not what I look forward to getting." Tao Yuanming did not desire for wealth or pursuit forever, addicted in a quiet life, his body and heart

were not bound by social affairs. Li Renlao's thought is that "official should wait for command, should return home in later years" which shows there was no hope to be a higher official, so he decided to go home to rest, obey the life development rules. What's more, Li Renlao was fond of visiting the Taoist priest, his Wen Ji Zhang Zi(《文机障子》) described a jubilant lively scene of the imagination, demonstrated his desire in fairyland. His "Chinese rose" (《月季花》) described his desire of visiting fairyland. Tao Yuanming likes drinking but it is a personal hobby, which will not change no matter how poor or rich, it is his nature dictates; The reason is that Li Renlao likes drinking is to travel in a fictitious world in half drunk state. Therefore, Tao Yuan Ming's thought of nature reacted in the attitude to life, it should be a return to himself, showing a simple state; Li Renlao's thought of nature reacted in the attitude to life, it should be transcending himself, free from tired affairs, exploring fairyland, showing a buzzed state.

In conclusion, Tao Yuanming and Li Renlao's "returning Home" realized their dreams of being far way from officialdom. The difference is that Tao Yuanming takes "returning home" as his ultimate destination of life. Tao Yuanming indulged in them joyfully, faced with positive attitude, put himself in harmony with the nature, realized realm of "unity of heaven and man"; Li Renlao chose "returning home" was because of his unsuccessful official career, his Xiaoyaotang(《逍遥堂》) obviously showed his attitude of seeking second best. Li Renlao was in embarrassment of seclusion

and being an official. To dispel boredom and sadness, he sat quietly with his mind travel to fairyland to achieve spiritual getaways.

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Textual Research on the Relationship Between Governor of Denglai and Governor of Shandong in the Ming Dynasty

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Abstract: The governors of Shandong province and Denglai district in the Ming Dynasty had multiple complex relations. The governor of Denglai district not only separated military power and coastal defense right of governor of Shandong province in Dengzhou, Laizhou and Qingzhou districts, but also alleviated the coastal defense pressure of governor of Shandong province. The establishment of the governor in Dengzhou district did not change the managerial area of governor in Shandong province, however, it formed a supervisor and assistant management situation that the rights of the two governors were interwoven. As for the major issues involved in the imperial court, governors in both Shandong province and Denglai district would cooperate closely, and shared the responsibilities.

Key words: Governor of Denglai, Governor of Shandong, duty and authority division, supervisor and assistant management, share responsibilities

Introduction

During the period of the emperors of Tianqi and Chongzhen in the Ming Dynasty, as a complete administrative unit, there were complete administrative systems of Shandong district. There were two governors in this area at the same time, governor of Shandong (official residence in Ji'nan) and governor of Denglai (official residence in Dengzhou). What roles did they play respectively in the complete administrative system? What kind of complex relationship between them? This article will research this issue.

Duty and authority division of governor of Shandong by governor of Denglai

From political aspect, there were six "Fu"s under jurisdiction of Shandong in the Ming Dynasty, and they were Ji'nan Fu, Yanzhou Fu, Dongchang Fu, Dengzhou Fu, Laizhou Fu and Qingzhou Fu, among which, the former three were called "west three 'Fus'", the latter three were called "east three 'Fus'". In the Ming Dynasty, governor of Shandong was also called "governor of Dong", the full name was "governor of Shandong, supervising agricultural land, river course, and military affairs". This government post was established in Zhengtong period (1436--1449), but was abolished twice in periods of emperor Chenghua and Zhengde. Except these two periods, it was retained to the end of the Ming Dynasty as a provincial level system.

According to Wanli "Code of Great Ming Dynasty" (2001) 《大明会典》: "In the fifth year of Zhengtong period, governor of supreme court in charge of trial of criminal cases was dispatched to

supervise Shandong province. In the thirteenth year of Zhengtong period, the Duyushi (governor of Duchayuan) was established. In the forty-second year of emperor Jiajing, the power of supervising agricultural land was added. In the seventh and eighth years of Wanli Period of the Ming Dynasty, the power of supervising river course and military affairs were added." From these, it can be known that "Code of Great Ming Dynasty" briefly described authority and its change of the governor of Shandong province. In the tenth year of Wanli Period of Ming Dynasty (1582), Lu Shude was assigned as the governor of Shandong. In the imperial edict, his authority was explicit: "Now, you are appointed to go to Shandong, to supervise military affairs, train army, build fortress, appease people, supervise coast defense, and in charge of tax grain, grain of border defense, and grain storage, prepare stored grain, prevent the invasion of northern minority groups. You should convey emperor's good intentions, carry forward the good virtues, punish bad virtues, so that farming and harvest be on time, people can live at ease in their own profession." (万历《青浦县志》) From this imperial edict, it could be known the authority of governor of Shandong was very wide, which referring to daily affairs, military affairs, border affairs, and maritime affairs, which showed this governor was the highest military officer in Shandong. What's more, as the area of jurisdiction scope of governor in Shandong, Wu Tingxie's "The Chronology of the Ming Dynasty" (Wu, 1982) (《明代督抚年表》) records: "commanding seven officials of rectifying armed force in the Ming Dynasty, namely Wuding, Jining, Caopu, Yizhou, Linqing, Qingzhou, and Dengzhou, six Fus of Ji'nan of Shandong Chief Secretary, Ji'nan of Dusi, Yanzhou escort etc., totally eighteen garrisons of Shandong province." For officials of rectifying armed force belongs to Anchasi

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system (judicial and procuratorial organs system), governor in Shandong actually had become the highest military officer of this area.

In the first year of Tianqi period, because of the needs of the war in Liaodong, the governor of Denglai was added in Shandong district, who was also called as “governor of Deng”, resided in Dengzhou, sometimes in Laizhou. The measure to add governor in Denglai came from Xiong Tingbi’s idea that was to utilize soldiers of Guangning County to hamper the main military of Later Jin Dynasty (the predecessor of the Qing Dynasty), depended on Navy of Tanjin and Denglai, caught the chance to recover South of Liaoning, so as to force military of Later Jin to look back, and then soldiers of Guangning County could recover Liaoyang. From Xiong Tingbi’s idea, the prominent strategic position of Denglai was revealed. Therefore, imperial court established a governor in Denglai district.

Denglai district was the jurisdiction area of governor of Shandong, so the establishment of governor in Denglai district separated the duty and authority of governor of Shandong. Generally Speaking, the division of duty and authority can be divided into two aspects. One was the division refers to geographical range. According to “Record of Emperor Xi Zong in Ming Dynasty” (《明熹宗实录》): “In June, the first year of Tianqi, Tao Langxian was promoted as Duyushi of Duchayuan, supervising Dengzhou, Laizhou etc.” These showed that the jurisdiction area of governor of Denglai mainly were Dengzhou Fu and Laizhou Fu. In the seventh year of Tianqi (1627), “governor of Shandong supervised Qingzhou Fu”. Before the establishment of governor in Denglai, governor of Shandong had become the highest military officer supervising Shandong. So from the geographical region the duty and authority refer to, governor of Denglai separated governor of Shandong’s duty and authority in Dengzhou, Laizhou, and Qingzhou. The other is the division of duty and authority itself. According to records of “History of Ming Dynasty”(1974) (《明史》): “Supervising Denglai, assisting military affairs” . On the basis of Ming Dynasty, add assistant for governor with Zongbing. According to records of “Shandong Tong Zhi”(1986) (《山东通志》) of emperor Yongzheng period: “During the mid year of Tianqi, governor of Denglai was established, Duyushi was appointed as governor of Denglai, in charge of lead troops and resist invasion.” It can be seen that, military affairs “History of Ming Dynasty” (1974) (《明史》) referring to were mainly hampering relative military strength and against military of Later Jin. What’s more, there were a long coastline in Denglai, which had some coastal defense functions. According to “Record of emperor Guangzong in Ming Dynasty” (《明光宗实录》), in the first year of Taichang (1620): “Wang Zaijin, governor of Shandong asked emperor for increasing force to reinforce and protect coastal defense. Theses proved that before the establishment of governor of Denglai, coastal defense affairs were supervised by governor of Shandong. According to records of “The upgrading of Dengzhou Fu” (2008) (《增修登州府志》), governor of Denglai “assist military affairs, supervise coastal Tunwei (a kind of

military organ)”, which showed the main duty and authority of governor of Denglai were military power and defense right, mostly divided from the duty and authority of governor of Shandong.

At the same time, the establishment of governor in Denglai alleviated the pressure of the coastal defense of governor in Shandong. If there was no “Deng Fu”, deployed troops and resisted invasion would be the duty of “Dong Fu”. Therefore, governor of Shandong would rush between Ji’nan and Denglai, result in caring for this and losing that. As minister of personnel in Tianqi, Li Zongyan said: “Shandong is far from Denglai, affairs changes rapidly, going to the right place takes time, so it would cause a situation of caring for this and losing that” (Record of Emperor Xi Zong in Ming Dynasty.) .

The duty and authority of governor of Denglai was not only in Dengzhou, Laizhou, Qingzhou, but also in Dongjiang town, some coastal islands, and some part of south of Liaoning. There was a tradition of “civilian control and authority over the military”. Dongjiang town initiated by Mao Wenlong, was restricted by governor of Denglai, alleged “North Korea (island) hampers chief Nurhachi (the king of Later Jin); Dongjian town is associated with North Korea; governor of Denglai controls Dongjaing town.”

(Record of Emperor Xi Zong in Ming Dynasty.) Lushun in south Liaoning was supervised by governor of Denglai. In the fifth year of Tianqi (1625), the Ministry of War in feudal China suggested: “Lushun should belong to Dengzhou, and establish a governor to manage Lushun restricted by “Deng Fu” and the other governors of the rest islands were authorized by “Deng Fu” according to their abilities.” In the seventh year of Tianqi (1627), Li Song, governor of Denglai suggested to supervise officers and soldiers of Lushun and Li Deng Town, which was permitted by imperial court. If, the defense of Lushun was restricted by governor of Denglai in the fifth year of Tianqi (1625), then Lushun had been classified as a part of Deng Zhou, commanded directly by Dengzhou Zongbing in the seventh year of Tianqi (1627). Accordingly, Dengzhou was restricted by governor of Denglai. Until July, the sixth year of emperor Chongzhen (1633), “Chen Yingyuan supervise Denglai, Dongjiang, prepare troops to support Liaoning, recovered Jin, Gai, assist to manage military affairs.” (Zhang, 2008)

We have noticed that there were closely administrative relation between Liaodong and Shandong in the Ming Dynasty, and there were even some scholars pointed out that: “In the Ming Dynasty, Liaodong belonged to Shandong province, not established independently.” ; “In the Ming Dynasty, Liaodong is a part of Shandong province.”(Cong, 1991) Then, did the restriction governor of Denglai to south of Liaoning refer to duty and authority division of governor of Shandong? In other words, before the establishment of governor of Denglai, did governor of Shandong has the rights to interpose affairs of south Liaoning? Upon these, scholar Zhang Shizun made a systematic study on the relationship between Liaodong and Shandong in the Ming Dynasty, he thought “During Hongwu and Yongle periods, there existed interference Bu An Er Si

(official of provincial supreme administrative authority) of Shandong to Dusi of Liaodong.” From later years of Xuande to middle years of Jiajing, authority was just put on Bu An Er Siof Shandong. “After years of Jiajing, Dusi of Liaodong had no substantial relation with Shandong province in system.” Military preparation system of Liaodong was just a “title” in Shandong. From these, until years of Tianqi, there would be no duty and authority interference of governor of Shandong to south Liaoning. Jurisdiction of governor of Denglai to Lushun and restriction to Dongjiang town should be the duty and authority division from governor of Liaodong, rather than the governor of Shandong.

In summary, the relationship between the governors of Shandong and Denglai is that governor of Denglai separated part of duty and authority of governor of Shandong whose duty and authority were shrunk for the establishment of governor of Denglai. From the geographical scope of the duty and authority refer to, governor of Denglai was mainly divided the duty and authority of governor of Shandong in Dengzhou, Laizhou and Qingzhou. From duty and authority itself, mainly divided military power and coastal defense right of governor of Shandong. Meanwhile, the establishment of “Deng Fu” alleviated the pressure of the coastal defense of “Dong Fu”.

Supervisor and assistant management of governor of Denglai and governor of Shandong

The establishment of governor of Denglai separated a part of duty and authority of governor of Shandong, does it also mean the supervising area of governor of Shandong has changed? For this question, in the discussion of supervising area changes of the governor of Shandong, Mr. Jin Runcheng said: “In the first year of Tianqi, Dengzhou and Laizhou were supervised by governor of Denglai as its establishment. In the seventh year of Tianqi, Qingzhou Fu was also supervised by governor of Denglai. In the second year of emperor Chongzhen period, governor of Denglai was abolished, then Dengzhou, Laizhou and Qingzhou were supervised by governor of Shandong again. In the third year of emperor Chongzhen period, governor of Denglai was restored, so Dengzhou, Laizhou and Qingzhou were supervised by it once again.” (Jin, 1996) In short, governor of Denglai changed the supervising area of governor of Shandong, the supervising area of governor of Shandong also changed with abolishment and restoration of governor of Denglai.

Actually, it is inappropriate to say like the above. The establishment of governor of Denglai was different from governor of Shandong, mainly established for war in Liaodong, whose main duty and authority were in military. Strictly Speaking, governor of Denglai had no supervising area as we often said, but for the actual needs of war in Liaodong, the terms of reference could be thought as its supervising area, which decided the instability of supervising area of governor of Denglai. Usually, governor, whose official ranked at the same level of Chief Secretary was called “provincial governor”, governor with Fu and garrison was called “regional governor” or

“special governor”. Therefore, governor of Shandong was “provincial governor”, governor of Denglai was “regional governor”. As for the supervising area relations of “provincial governor” and “regional governor”, Mr. Fu Linxiang pointed out: “The supervising area of provincial governor and regional governor is overlapping, not one increase, the other decrease.” Meanwhile, Fu Linxiang mentioned that Dengzhou, Laizhou and Qingzhou belonged to both governor of Denglai and governor of Shandong.

For Dengzhou, Laizhou and Qingzhou belonged to both governor of Denglai and governor of Shandong, Fu Linxiang took governor of Shandong asked imperial court to replace imperial edict for Haifangdao (a kind ancient Chinese official name) of Laizhou as a proof, thought that the supervising area of Haifangdao and governor of Denglai was completely overlapped. It could be seen that Dengzhou, Laizhou and Qingzhou belonged to both governor of Denglai and governor of Shandong. Actually, Haifangdao of Laizhou wasn't a Fenshoudao (a kind ancient Chinese official name) supervising Dengzhou, Laizhou and Qingzhou, and assisting coastal military affairs of Laizhou. Fenshoudao was in charge of civil affairs, this behavior of governor of Shandong was just to perform its administrative functions and powers, because governor of Denglai divided military power and coastal defense right of governor of Shandong in Dengzhou, Laizhou and Qingzhou, but didn't separate its administrative power. So, what Fu Linxiang mentioned that Dengzhou, Laizhou and Qingzhou belonged to both governor of Denglai and governor of Shandong, referring to the three belonged to governor of Shandong in administration, and belonged to governor of Dengzhou in military.

In fact, the meaning of “Dengzhou, Laizhou and Qingzhou belong to both governor of Denglai and governor of Shandong” is not only in this. We have noticed that although Dengzhou, Laizhou and Qingzhou belong to governor of Denglai in military, governor of Shandong still has a certain right to participate in military affairs and coastal defense of Dengzhou, Laizhou and Qingzhou. Governor leads official of Dao to manage local place. During Tianqi and Chongzhen periods of Ming dynasty, Qingzhou Bingbeidao, coastal defense Bingbeidao (manage Dengzhou, Laizhou, Qingzhou) and Haifangdao of Dengzhou were established. The three Daos (officials of rectifying armed force in Ming Dynasty) referred to military and coastal defense. In the first year of Chongzhen (1628), the imperial court abolished Denglai Zongbing, to establish vice Zongbing. Wang Congyi governor of Shandong reported to the emperor “Dengzhoudao provincial judge, Wang Tingshi reported, Zongbing should be dismissed, good general is rare. Since Yang Zhen, Zongbing corrupted, bribed and abused.....Now, Zhang Dake comes, work for the local people.....Behavior is opposite to the previous governor, soldiers are delighted to ask him stay in this place.” Dengzhoudao here should be Dengzhou Haifangdao which suggested Denglai Zongbing Zhang Dake to be vice Zongbing, governor of Shandong permitted and reported it to imperial court. Dengzhou Haifangdao and Dengzhou Zongbing were military based system, which showed governor of Shandong still had a voice in

military affairs and coastal defense of Dengzhou, otherwise this thing should be reported to imperial court by governor of Denglai.

After the establishment of Shandong Zongbing, military authority of governor of Shandong and governor of Denglai changed. In the seventh year of Chongzhen period (1634), imperial court changed Denglai Zongbing (abolished in the first year of Chongzhen, restored later) to Shandong Zongbing, still resided in Dengzhou. In the imperial edict given to the new Shandong Zongbing said: "All military affairs in these areas should be decided together by governor of Shandong and governor of Denglai." which means Shandong Zongbing were led by both governor of Shandong and governor of Denglai. Shandong Zongbing managed military power of the whole province, which showed military authority of governor of Shandong and governor of Denglai was extended to the whole province, they deal with military affairs together. The reason is that Liaodong battlefield is mainly on the land, the importance of coastal defense was declined, but at the end of the Ming Dynasty peasant uprising developed rapidly. Therefore, the imperial court needed re-integrate defense system of Shandong area.

From these, we know that before the establishment of Shandong Zongbing, Dengzhou, Laizhou and Qingzhou districts belonged to governor of Denglai in military, but governor of Shandong still had a certain right to participate in military affairs and coastal defense of these areas. After the establishment of Shandong Zongbing, military authority of governor of Shandong and governor of Denglai was extended to the whole province, they dealt with military affairs together.

Dengzhou, Laizhou and Qingzhou belong to governor of Shandong in administration, does governor of Denglai have right to deal with affairs in these areas?

History books recorded that governor of Denglai participated in economic construction. For example, Tao Langxian governor of Denglai once reported to the imperial court: "Order Denglai and Liaoning are not to prohibit intercourse, thus trade would be constant, every one can become rich, that is Qingzhou, Laizhou, Huai-Si area can trade with Denglai and Liaoning." Tao Langxian focused on economic development in Denglai and southern Liaoning, actively advocated opening the ban on maritime and developing maritime trade. These showed governor of Denglai had the right to make suggestions to the imperial court on local economy problems. Another example is that in the tenth year of Chongzhen period (1637), imperial court "order states and counties with mine to allow businessman and the people to exploit. Yang Wenyue, governor of Denglai asked emperor not to do like this, the emperor gave him stern rebuke". At the end of Ming Dynasty, the mining policy was restored. Yang Wenyue, governor of Denglai was afraid of disrupting the folks, reported to the emperor, asked the prohibition of mining, but resulted in a stern rebuke. Normally, it should be governor of Shandong to report to emperor, so governor of Denglai as a special and military governor to do this was slightly exceeding his own authority. However, as a matter of fact, governor of Denglai has a part of authority to manage some livelihood issues, and reported to

emperor was within the scope of duties.

What's more, the governor of Denglai had legal informed right and disposal right on special cases in territory of Shandong. For example, in the fourth year of Tianqi (1624), there was a case about "Han Zonggong", after treatment advice on this issue, the Ministry of War in feudal China said: "We should take advice from governor of Shandong." Later, there was another case about "Zhang Erxin' rebellion", at the end of "Drafts of Ministry of War asked to punish Zhang Erqing etc" (2001). (《为山东擒获张尔心等请旨处分事行稿》), the Ministry of War in feudal China said: "We should take advice from governors of Shandong and Denglai, and Duchayuan....." The cases about "Han Zonggong" and "Zhang Erxin' rebellion" are of partial military nature. Although they were not civil cases in general, to some extent, they embodied governor of Denglai had certain judicial power, rather than military power in a simple sense. In ancient China, there was no independent judicial power which usually belongs to executive power.

It is clear from above, governor of Denglai is not only with military authority and coastal defense right, but also has participation right in economic development and livelihood construction in Dengzhou, Laizhou and Qingzhou areas, has judicial power in special cases and their discretion.

To sum up, military and coastal defense of Dengzhou, Laizhou and Qingzhou district belong to the duty of governor of Denglai, but governor of Shandong can also know and participate in. Government affairs of Dengzhou, Laizhou and Qingzhou district are duties of governor of Shandong, but governor of Denglai can also know and participate in. In order to fully clarify the power relationship between the governor of Shandong and governor of Denglai, we will use the concept of "supervisor management" and "assistant management". According to above discussion, governor of Shandong mainly manages government affairs of the whole Shandong province, military affairs of "west three Fuses" and assists to manage military affairs and coastal defense of Dengzhou, Laizhou and Qingzhou districts. Governor of Denglai mainly manages military affairs and coastal defense of Dengzhou, Laizhou and Qingzhou districts and assists to manage government affairs of these areas, its military authority once extended to Dongjiang town and southern Liaoning. The reason for this is that the long-term coexistence of governor of Denglai and governor of Shandong. In the actual operation of the military and political affairs, it is difficult to obey the scope of duty and authority imperial court given. Whether on government affairs or military affairs, the government agency of Dengzhou, Laizhou and Qingzhou districts would report to and ask instructions from governor of Denglai and governor of Shandong at the same time, which forms a "supervisor management" and "assistant management" situation that authority of governor of Denglai and governor of Shandong intertwined with each other.

Cooperation and common responsibilities of governor of Denglai and governor of Shandong

On the major issues involved in the imperial court, governor of

Denglai and governor of Shandong have close cooperation relations. Firstly, it is the cooperation on war in Liaodong. Governor of Denglai was established for war in Liaodong, its main duty was to control Dengzhou town and Dongjiang town, recover southern Liaoning, stop Later Jin across the sea to capture southern Liaoning. Since the early years of Ming Dynasty, Shandong was considered as rear area of Liaodong. As the start and development of war in Liaodong, Shandong had become the rear base of the front of Liaodong. According to records of “Shandong Tong Zhi” (《山东通志》) of emperor Yongzheng period: “In the middle years of Tianqi period, governor of Denglai was established, Duyushi was appointed as the leader to deploy troops, resist invasion, governor of Ji’nan provided food to support.” These showed, on war in Liaodong, governor of Shandong was in charge of preparing food to assist war plan of governor of Denglai. Dongjaing town was controlled by governor of Denglai. Zongbing Mao Wenlong has repeatedly asked imperial court to order Shandong to provide food. “On March 12, Zongbing Shen Youron was in command of the elite troops, moved out to sea with innumerable ships, Nurhachi was terrified, but Shen was afraid of short of money and food, so that soldiers were powerless. He reported to imperial court to ask for money and food from these areas and Chief Secretary of Shandong.” (Record of Emperor Xi Zong in Ming Dynasty.) This embodies Shandong is the rear supply base of Liaodong. Governor of Shandong takes the overall responsibilities to prepare food, Chief Secretary and governor of each state and county shared its responsibilities. In fact, in Wanli period of the Ming Dynasty, courtiers had proposed to establish governor of Denglai, and imagined the relation between governor of Denglai and governor of Shandong, such as courtier Shen Yiguan said in “Ken Tian Dong Sheng Shu”(Chen, 1962) (《垦田东省疏》), “The emperor adopted suggestions, established governor of Tianjin and Denglai, in order to defense and attack, and order mainland governor to support by providing soldiers, food and weapons.” “The governors of the mainland” is corresponding to “governor of Tianjin and Denglai”, they should be governors of Baoding and Shandong. Shen Yiguan proposed “to establishment a governor in the middle of coastal area of Tianjin and Denglai to lead Zongbing, Bingbei, Canyou (official name of ancient China) to manage seaway”, take the responsibilities of guard, governor of Baoding and governor of Shandong were assistants. So, this thought should be long-standing.

Secondly, in the crackdown on civil strife, governor of Denglai and governor of Shandong took shared responsibilities. During the period of Kong Youde’s rebellion, governor of Denglai and governor of Shandong cooperated to suppress the civil strife. At first, Sun Yuanhua, governor of Denglai and Yu Dacheng, governor of Shandong were not of one mind on suppress the civil strife, Sun Yuanhua proposed to appease, while Yu Dacheng proposed to suppress. This condition made rebel forces triumphed all the way, the next year, Dengzhou was captured by rebel forces. In the fifth year of Chonghen period (1632), the imperial court appointed Xu

Congzhi as governor of Shandong, residence in Laizhou with Xie Lian governor of Denglai.” Rebel forces led by Kong Youde sieged Laizhou, Xu Congzhi and Xie Lian jointly led the army to resist exerting all their energies. Finally, Xu Congzhi died in battle and Xie Lian was captured, then killed. The imperial court appointed Zhu Dadian as governor of Shandong urgently, residence in Qingzhou, lead the army, responsible for extermination. In August, Zhu Dadian took a mass pledge in Changyi, led twenty thousand army, marched in Laizhou, the rebel forces were defeated utterly. Until then, the six-month-long difficult position of Laizhou was resolved. In September, Ming armies gathered in Dengzhou, recovered Dengzhou in December, then rebel forces were suppressed assumably. From the death of Xie Lian to March, the sixth year of Chongzhen period (1633), governor of Dengzhou was a vacancy, governor of Shandong is responsible for it.

With the development of the peasant uprising, Shandong was soon involved in the war. In the tenth year of Chongzhen period (1637), Yang Sichang was Minister of War, he pointed out a strategy: “Si zheng liu Yu, shi mian zhang wang”. “Si zheng is Shanxi province, Henan province, Huguang and Jiangbei, governors of these areas exterminate peasant army and defense specially; Liu Yu is Yansui, Shanxi province, Shandong province, Jiangnan, Jiangxi province, Sichuan Province, governors of these areas defense and assist to exterminate peasant army; Zongdu and Zongli (official name of ancient China) go to rebel location to fight.” (History of Ming Dynasty, 1974) As one of “Liu Yu”, Shandong province was formally incorporated into the strategic system. Governor of Shandong and governor of Denglai share the “defense and assist to exterminate peasant army” task.

In history books, there are many records about coordination of military operation of governor of Shandong and governor of Denglai under the overall layout. For example, in the eleventh year of Chongzhen period (1638), in 《十八审机宜疏》 Yang Sichang mentioned a strategic general layout, he said: “All the soldiers exterminating peasant army should be withdrawn, such as Liu Zeqing, Kong Xigui, Yan Jizu governor of Shandong should go to Hejian, Yang Wenyue governor of Denglai should assistant. ...” In the strategic layout, Yang Sichang suggested Yang Wenyue governor of Denglai shifted army to the east to assist Yan Jizu governor of Shandong. Whether governor of Shandong or governor of Denglai formally incorporated into the strategic system of “Si Zheng liu Yu, shi mian zhang wang”, coordinated with each other, cooperated with each other, to suppress the peasants army. However, as the bankruptcy of strategy “Si Zheng liu Yu”, and the final collapse of the Ming Dynasty, “Qiu Zude governor of Shandong, Xun An (official name of ancient China) Li Rixin, governor of Denglai Zeng Hualong, Zongbing Huang Fei all run toward south.”

In addition, when involved in collective matters of imperial court, governor of Shandong and governor of Denglai would represent Shandong to declare position, and act in unison. At the end of Tianqi period, Minister Wei Zhongxian reached his peak power,

many provincial governors attached to him, requested to construct temple for him, Shandong can not be avoided. According to record of history books, "Li song governor of Denglai asked to build temple for Imperial Eunuch Director. The emperor permitted to build temple for living official.....the name of temple in Ninghai county was Jingren, in Penglai was Liuqing. Li Jingbai governor of Shandong reported to imperial court about the same thing and expressed the same meaning." (Xian ba zhi shi) (Zhao Yi, 1984) scholar of the Qing Dynasty, mentioned " temple for living official Wei Zhongxian" in "The Reading Notes on the Twenty-two Histories" (《廿二史札记》): "Li Song, the governor of Denglai, Li Jingbai, governor of Shandong built the temples in Penglai and Ninghai County." These showed governor of Denglai and governor of Shandong reported the same thing, represented Shandong to declare position, and built temples together.

Concluding remarks

In the Ming Dynasty, there existed multiple relations between governor of Shandong and governor of Denglai. At the end of Ming Dynasty, governor of Shandong had become the highest military officer in Shandong actually. The establishment of governor of Denglai separated military power and coastal defense right of governor of Shandong in Dengzhou, Laizhou and Qingzhou districts. Meanwhile, it reduced pressure of coastal defense of governor of Shandong. The supervising of "Deng Fu" to southern Liaoning, Dongjiang islands was duty and authority division for governor of Liaodong, not for governor of Shandong. Governor of Denglai itself hadn't proper area under its jurisdiction, the establishment of which didn't change the original supervising area of governor of Shandong, but formed a "supervisor management" and "assistant management" situation that governor of Shandong and governor of Denglai interweave with each other. Governor of Shandong was in charge of government affairs of Shandong province and military affairs of "West three Fuses" and assist to manage military affairs of Denzhou, Laizhou and Qingzhou districts; governor of Denglai was in charge of military affairs of Denzhou, Laizhou and Qingzhou districts and assist to manage government affairs of these districts. After the establishment of Shandong Zongbing military powers of governor of Shandong and governor of Denglai were extended to the whole Shandong province, they dealt with military affairs of Shandong together. On the major issues involved in the imperial court, governor of Shandong and governor of Denglai had close cooperation relations. Firstly, on affairs in Liaoning, governor of

Shandong assisted governor of Denglai to deal with. Secondly, governor of Shandong and governor of Denglai shared responsibilities in suppression of civil strife. After Yang Sichang ruling Ministry of War, whether governor of Shandong or governor of Denglai was formally incorporated into the strategic system of "Si zheng liu Yu, shi mian zhang wang", cooperated with each other to coordinate operations. Lastly, when collective affairs involved in the imperial court, governor of Shandong and governor of Denglai would represent Shandong to declare position, and act in unison.

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Is 'Framing' Important? Illustrate Framing in News Coverage of Social Issues

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Abstract: In recent years, the scholars gradually found that the media organizations and journalists are not the only "gate keeper" of news, some other reasons might be change its valuable, for instant, the scale of social event or the news value. Among those elements, the resource seems more important relay on its close relationship with the political (Reese, Grandy & Grant, 2001). Whether the news is constructed by the journalists or the news resources faced a difficult choice, finding a new perspective and interpretation seems necessary. The news frame and framing theory contains a widely concern in recent years. It is called as the new paradigm in researching the relationship between the media and public deliberation, it is far-reaching to explore the connotation of its concept. This essay will research the importance of framing to social issues by explain the definition of framing and analysis the framing working principle from the emotional and political aspects, finally state the meaning of framing.

Key words: Journalist, news frame, symbolic interaction, emotional factors

Introduction

It is no doubt a long-standing academic point of view that the news is the symbolic reality, which constructed by the journalists. In the early time of the field of traditional communication science, the "gate keeper" model has hypothesis that the production process of news is through the multi-layer control and selection of media organizations and some individuals (Watson, 2007). In addition, the journalists continuing to select and filter the information from the news resources, emphasizing the salient point of the certain information, in order to make them more significant so that the audience can accept the information more easily (Entman, 1993). While in the following research, the scholars gradually found that the media organizations and journalists are not the only "gate keeper" of news, some other reasons might be change its valuable, for instant, the scale of social event or the news value. Among those elements, the resource seems more important relay on its close relationship with the political (Reese, Grandy & Grant, 2001). Whether the news is constructed by the journalists or the news resources faced a difficult choice, finding a new perspective and interpretation seems necessary. The news frame and framing theory contains a widely concern in recent years since it was origin mentioned in the 80s of 20th century. It is called as the new paradigm in researching the relationship between the media and public deliberation, it is far-reaching to explore the connotation of its concept. In this essay, I will research the importance of framing to social issues by explain the definition of framing and analysis the framing working principle from the emotional and political aspects, finally state the meaning of framing in the following discussion.

What is the "framing"?

The concept of "frame" is generally attributed to the work of Erving Goffman and his book *Frame analysis: An essay on the organization of experience* in 1974. In the book, he mentions that People unconsciously monitor the social environment in order to adjust their own expectations and behaviors rely on the change of the surrounding (Goffman, 1974). The concept of "frame" which proposed by Goffman, it is elaborate on how people understand the events of their everyday life, while other scholars introduced the concept into the field of journalism later. According to Reese (2007), frames as a structures that divided the boundaries, arrange the classification, in order to define diversity ideas in an active process, which can be used in stories, times and especially in media context. He also offered the definition that frame works as a meaningful structure to the society, which persists over time and establishes principles for community to share.

From the dynamic aspect, the scholars raise the concept of the news " framing". Framing is not only a unified model but also a research program, and the divergence of theoretical is gradually beneficial for the developing process of comprehensive understanding (D'Angelo, 2002). In addition, framing offers an approach for events and social issues to be organized and become meaningful by media and also by audiences (Reese, 2001). The approach might be too static because the experience is completely formed and decided in advance, Reese argued (2007), however it is a valuable corrective because in the dynamic process of frame embedded into the news, people have seen an significant regardless cognition. It is can be seen from the definition discussion above that

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as the coverage themselves, understanding the concept of “frame” will help to reveal the elements which embed into the news context, lead journalists to do the report that follow the essential point of views, and shape the audiences’ understanding of social reality as well.

How “framing” work?

The news media use framing not only want to simply represent a news reality, tell people the information, but also focus on how to explicate the event. The frame package offers the event a definition, an explanation even an evaluation (Bateson, 1955/1972). Furthermore, as it is well known that framing concern to shape public discourse, it is also a discursive communication about the social issues (Pan & Kosicki, 2001). The effects of framing to social issues are obviously significant, in the following discussion, I will analysis the importance and its functions from the aspect of its emotional factors and political factors.

The influence in symbolic interaction and emotional factors

In the field of media communication, the media makers, news resources and receivers have strong interaction with each other. It can be seen that the framing in context leads the interplay between the news story and the audience (Van Gorp, 2007). Those causal relationships represent the attribution of framing in social interaction (Steinberg, 1998).

In the process of news coverage, each type of media has their own characters to represent the meaning of framing, and the emotional factors often plays an important role in framing the news. In another word, the establishment of the news framing, usually conveys some kind of emotional factors to the receivers at the same time. The media organization and journalists convey the emotional factors through the choice of news reality and news narrative that affect the audience's emotional identification to some extent, the framing dose have the foundation which can making the emotional elements become more salient, in order to let receivers more likely to notice the news context (Entman, 1991), transform the attitude of receivers to the social issues, and enhance the influence of news framing. For example, in the event that the handover of Hong Kong to China, the Chinese media did not choose to use the frame approach to portray the even as a conflict between two or more parties, because that will lead some follow questions, like how the conflict went on, and that kind of frame might be hurt the Chinese people's national feeling, effected the national cohesion. So the final framing is portrayed the China as a nation family, or like a mother who desire the return of her child. Meanwhile portrayed the handover as Western imperialism should responsible for the whole event and the policy to govern the Hong Kong is one country with two political and economical systems (Van Gorp, 2007).

However, Van Gorp (2007) represents his argument that the thoughts of receivers are inconsistent with the meaning that journalists want to apply, which might be the unexpected effect. The reason of this phenomenon as Van Gorp supposed that the audience are not fascinated by the news stories, they did not attracted by the frame, just like a bystander, not into it.

The influence in political area

Recognition of the role of emotional factors does not mean the media organizations and journalists can do the news selection taken for granted and use whatever approach they like. There is actually an “invisible hand” which controlling the information and communication styles in the framing process, even in the so-called news freedom countries. The media practitioners well known that which news can be selected and which symbolic framing can be used, in order to highlight the orientation of the framework and satisfy the interests of the political elite and pressure groups. Therefore, the journalists must be examined the report content and the framing style at first, for the sake of performance some specify news topic through the symbolic process of variety of structural styles.

In the current society, we are living in the era of “talk”. As the amplification of the type of communication, many new media came out and broke the traditional boundaries between the individuals and media, the individuals and the political, as well as the media and the political issues, the interaction between those elements had changed to some extent according to the transformation of media environment (Pan & Kosicki, 2001). Even the situation of current media like that, while in the filed of communication, the individuals also can comprehend the role of the media in political life through the framing (Reese, 2001).

Most of the political conflicts are original from competing the meaning of framing, each parties of the dispute constantly trying to recommend the interpretation in framing which from their own version and in their own interest, for the use of mass media (Pan & Kosicki, *ibid*). This phenomenon is most evident in the electoral process. In the normal circumstance, the news media will adopt the interpretation from one part of the competitors. As the research before has found, the resource from the government of political elite always be the basis that media choose to framing. The resource of framing used by political actors to promote their rights through the content of news report and help them to won the public discourse in the political competition performance (Pan & Kosicki, *ibid*). For instant, the American president McKinley allows the reporters to closely approach him, be stay in his side and held press conferences regularly. Moreover, he prepared advance for his statement, those methods of cooperation with the media help him won the victory in the political competition, as well as the framing competition. If we analysis this historical White House press corps from the view of current news situation, it is much more easier to understand the interaction between political elite and the news framing (Reese, 2001).

To find the right way of framing, consider the boundaries of framing the social issues is extremely important in political area. In the Persian Gulf War, the political elites approach to the Bush administration, which has made a successful case of news framing. They framed the event as a controversy over the appropriate choice of a narrow range deliberation to “punish” the Iraq and corrected the invasion behavior of Iraq. While the anti-war protests, felt into the public debate because they were not successfully on consider correctly the boundaries of framing the issues (Meyer, 1995).

Although the political factors as an invisible hand to control the framing, while the communication itself is an interaction process, the media provide an open discourse area for all the public. Actually, the framing is not an one-way street in the public discourse (Pan & Kosicki, *ibid*), some scholar argued that it is necessary in some special conditions, which the audients and journalists can use framing to correct or we can say to overcome the unrepresentative view of the political elite (Page & Tannenbaum, 1996). For example, Page and Tannenbaum (1996) shows a case in their book, which mentions the nomination of Zoe Baird. This framing is very successful because it focuses on discourse the division of social class and respect for the legal norms, it is also because the aim of the framing adjust to the credibility of experiment and the authenticity of the narrative. However, the relationship between framing and political and the role of framing into the politics are still obviously and significant in the communication field.

What is the meaning of “framing”?

From the “9.11” event to the war of Baghdad, behind the disaster and the flames of war, the international press began a war of no smoke. It is different from the war of two camps’ during the Cold War. The competition in current society is utilize the modern communication technology, start in the “ free market of the view”, the competition with each other is its main feather. Framing for one certain news reality is usually distinct in variety of media, while a frame also can applied to different topics (Van Gorp, 2007). For example, many Western European countries are facing a problem of being a influx of asylum seekers and illegal immigrants, public policy often have to find a new host location. The journalists can apply many kinds of frame to report the establishment of that asylum centre. There may be at least six kinds of framing approaches: as evidence of government mismanagement; as suspicious of strangers gathering and crime; as the demonstration of our hospitality; as provide an opportunity for neighbors; as a refuge to the refugees; as an inconvenient reason for poor choice because the location (Van Gorp, 2007). The inherent constraints of cultural, ethnic, national, class, intellectual and moral, are the main reason of news story choose to use a certain frame. If want to resolve puzzles in peoples’ mind, and tap the potential significance of the news media through the surface meaning, we need to study and explain the source of news frames, type and mechanism of action, standing theoretical level to sort out its occurrence, development and future.

Audience obtained the social reality just from the framework in news reports maybe cannot get the truth. If individuals only take this reality as a channel for their own sense of the world, it is often leads consequences of ideas and action bias. Meanwhile for the media themselves, the journalists as a “gate keeper”, often made efforts in good faith, but still cannot eliminate the limitations in reporting. The frame theory and the micro-level and macro level journalism are directly linked. In the process of news writing and editing, it is not

rhetoric or genre layout that play a commanding role, but the framing in the mind of the journalists. It is specifically expressed in the perspective, edit philosophy and approach, etc. While in the aspect of the macro level, the press frame theory can be directly derived objective basis for a variety of media, in order to interpret the necessity and inevitability of “One World, Many Voices”.

Conclusion

The subject of frame theory for discussion is to understand how the social issues form a specific meaning through symbol system of social issues. In the process of that symbolic system construct the social issue, both the organizations and individuals enabled the subjective interpretation model, making the part of issues silences through the selection mechanism. Those subjective strategies of constructed meaning or conversion symbolic intention are the main basis for forming the news frame.

From this we can see that, the news framing we discussed above, it is extremely important to coverage social problems. On one hand, represent the approach that how the journalists and news organization covered the social issues, while on the other hand, it is also shows the way that how the general people interpret symbolic system objectively. Framing for the interpretation of information has opened up more space for coverage social issues, interpret more meanings to capture the dynamic process, and stressed the relationship between different discourses. Depend on the framing, audience can see alternative narrative approach and feeling the different sense in the same topic social issue news report, upon the frame applied which given by media organizations or journalists.

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Quality Teaching: Different Teacher Beliefs in Classroom Engagement

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Abstract: A quality learning environment requires student engagement. Compared with Western educational beliefs, obvious differences can be seen in Chinese educational beliefs in the understanding of classroom engagement. Many contemporary Western researchers propose a more integrated definition of student engagement using multiple dimensions, which include behavioral engagement, emotional engagement and cognitive engagement. Meanwhile, Chinese culture of learning is often described as the four Rs (teaching patterns of reception, repetition, review, and reproduction) and the four Ms (learner behaviors of (being) meticulous, memorizing, (quiet) mental activity, and ultimate mastery). This leads to an epistemic model of expository teaching, requiring commitment and effort, receptiveness, and conformity on the part of learners. Hence, quality teaching is advocating student-centered teaching and learning that stimulates student engagement from the classroom to the school level and beyond. For the sake of the pursuit of quality teaching, teachers first need to have a swift change in their belief of “engagement” and then they need to be aware in two areas: proper selection of teaching strategies and adoption of necessary scaffolding.

Key words: classroom engagement, quality teaching, teaching strategies, teaching beliefs

Introduction

One of teachers' key roles is to provide a quality learning environment where students and teachers work productively focused clearly on learning. Quality learning requires teachers to set high and explicit expectations of students and develop positive rapport with students so that students may become more engaged in learning. Only when “pedagogy helps make learning meaningful and important to students” (NSW Department of Education and Training, 2003, p. 9) can teaching be helpful and encouraging students to realize the importance of education both in their present and future lives.

A quality learning environment requires student engagement. What is “engagement”? There are divided opinions on the understanding of it. Munns and Martin (2005) argued that engagement was when cognition, behaviour and emotion came together at high levels. Woodward and Munns (2003) made the point that there is a major difference between procedural and substantive engagement and used the REAL Framework to help establish the level of engagement in classrooms (Munns, 2007, p.304). Procedural engagement sees students as being on task and complying with teachers' wishes and instructions. Substantive engagement understands that engagement is a sense of satisfaction with, and a psychological investment in the classroom work being undertaken.

I would like to talk about this topic from the recent

documentary on the Internet first.

1. A story from a recent documentary

Recently there is a hot documentary on the internet, in which five Chinese teachers took over a British classroom with 50 teenagers aged 13 and 14 in Bohunt School in Hampshire for one month, and taught them in a typical Chinese way: no talking, no questions, wearing a special uniform and experiencing the harsh classroom discipline within an extended school-hour from 7am to 7pm. Students in the experimental program had to do morning exercises, took compulsory physical education of long-distance running, and were also required to do eye exercises during breaks. Some of the students were caught on camera in tears — as was one of the teachers.

During the experiment, some British Students say:

“Acting like robots was the right way to go. For me, it was something I found difficult to get used to. I'm used to speaking my mind in class, being bold, giving ideas, often working in groups to advance my skills and improve my knowledge.”

“One of the hardest things to deal with was different expectations of me as a student. The classroom environment felt stressful and enclosed. When you have 50 other pupils in the room it's hard enough to concentrate without being made to feel as if you are competing against them all the time.”

“The Chinese teachers think the pupils in their classes are like bulletproof sponges, sucking in information yet conveniently

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ignoring the fact they are tired and very bored.”

These lead to remarkable debates over the two different teaching cultures, teaching beliefs, and effectiveness of teaching outcomes. Chinese teaching methods were on a collision course with British teaching culture and values. However, Chinese people will not be surprised at the incredible commitment of the students, enormous class sizes and immaculate behavior. Students are used to copying "stuff" from the board as they thought this would help them remember it. Chinese students usually study harder and have a clearer goal due to their parents' demands and their own planning.

But British students have their own characteristics. British pupils are used to being able to ask questions of the teacher - they expect their views to be considered with respect. Furthermore, British pupils expect to have variety in their learning. They are not used to being incarcerated in a large group and in the same classroom studying a very narrow curriculum. British teens always say 'make the world different'. They care less about good marks or low marks, but pay attention to extracurricular activities. They have very good coping capacity and hands-on skills. In addition, they are mostly good at making speeches. Student autonomy, questioning and the development of skills to allow students to think for themselves are the key elements in British pedagogical approaches - and do not appear to be part of the Chinese approach. These characteristics of British students are reflected in their classroom performances and their understanding of classroom engagement.

This documentary perhaps exposes so clearly the differences in British educational belief of classroom engagement to those in China. The beliefs we hold decide the actions we take in classrooms. It seems that most typical Chinese teachers hold the belief that well-disciplined strict-structured classrooms contribute to better engagement of students and thus better outcomes. Because teachers can put more efforts on lecturing knowledge. But British educational belief on the other hand stresses student autonomy, questioning and hands-on skills. By designing interesting experiments and discussion circles, teachers try to attract students to get better engaged in class so that they learn better. This explains British students' feeling uncomfortable with the typical Chinese way of classroom requirements. Which understanding of pedagogical approach to getting students engaged should we take for the benefits of our students?

2. My experience of learning and teaching English

The second story is from my own experience of learning and teaching English for the past decade. There is also a gradual but obvious change in my belief in classroom engagement.

Littlewood (2006) states the importance of having awareness of Chinese students' previous experiences of learning in China and of their own cultures of learning. The traditional Chinese culture of learning is identified as one in which education is conceived more as a process of knowledge accumulation than as a process of using knowledge for immediate purposes, and the preferred model of

teaching is as a mimetic or epistemic that emphasizes knowledge transmission. Therefore, teacher-centered methodologies are highly supportive of Chinese classrooms. This Chinese view of teaching conflicts with the student-centered methodologies generally practised in Western countries.

I was educated in an exam-oriented education system in China where teacher-centered teaching strategies and processes dominated all aspects of my education. In the middle school, memorization of vocabulary lists, knowledge of grammatical rules and the ability to recite texts become increasingly important and by the end of senior middle school English learning becomes dominated by exam-preparation activities. At university the situation was the same. In most of these lecture-styled classrooms, teachers worked to teach students English so they can "Reach Higher" but seldom paid attention to students' "ENGAGEMENT".

After I became an English teacher, I worked with teachers in a way that helped students get engaged with the pedagogy used and the strategies developed. By focusing on engagement, I gradually realized I had to consider gender and the interests and behavioral differences of each individual student in the class. I had to consider the backgrounds, interests and individual differences of the students I taught to make them behave and engage themselves better, and achieve better results in class. For the first few years, in order to engage students, I incorporated cultural perspectives into teaching as a "hook" to interest them so that students could compare Western and Chinese cultures. I was pleased that they found cultural stories and experiences was great fun in class. Teenagers loved games and competitions. I created different kinds of games for them to participate in. When I organized students to compete with each other, from their excited expressions on the face, I soon realized that they were so engaged and behaved differently compared with their previous performance, and students even became so eager and anxious to attend English classes.

Engaging students in class provided me with a real sense of achievement. When they were less engaged it made me reflect on the teaching strategies used. More importantly, I understood how to engage myself in teaching and learning. Student engagement can help students study in class and can also be regarded as a way of monitoring and providing feedback to the teacher about his/her engagement as s/he attempted to stimulate student learning and thereby improve teaching proficiency. When preparing and delivering lessons, teachers engage themselves a lot in developing different teaching strategies and materials so that students can be purposefully engaged in the process of teaching. Therefore, student-centered classroom teaching was gradually constructed by focusing on student engagement.

The necessity for real engagement encouraged me to think hard about teaching in interesting ways. In a Chinese traditional teacher-centered classroom, students are busy finishing tasks and goals set by teachers, but they are mostly not so happy as they are "forced" to perform in a highly structured classroom. The forced

engagement may stimulate some students' potential and save time for more meaningful knowledge learning for the sake of overall efficiency, but this is not suitable for every student and in most cases their voices have been ignored. What's more, such assumed engagement of students may cause the reduction of teachers' effort in engaging themselves in designing and creating a better learning environment for students. Then there must be something wrong with our requirement of students' engagement in this way. So what is a correct understanding of students' engagement?

3. Research from Western culture and Chinese culture on classroom engagement

There are obvious differences in the understanding of classroom engagement between Western world and Chinese traditional values.

3.1 Definition of engagement

Marks (in Klem & Connell, 2004, p. 3) defines engagement as "a psychological process, specifically, the attention, interest, investment, and efforts students spend in the work of learning". Other researchers define engagement as "students' involvement with school, (a sense of belonging and an acceptance of the goals of schooling)" (Finn in Klem & Connell, 2004, p.3); their "psychological investment in and effort directed toward learning, understanding or mastering the knowledge, skills, or crafts that academic work is intended to promote" (Newmann in Klem & Connell, 2004, p. 3).

More contemporary researchers propose a more integrated definition of student engagement using multiple dimensions, addressing related facets of human development such as behaviour, values and cognition (Archambault et al., 2008). Jimerson et al. (2003) categorize engagement into three dimensions – affective, behavioral and cognitive.

Emotional/affective engagement refers to inner processes such as: "students' affective reactions in the classroom, including interest, boredom, happiness, sadness, and anxiety" (Fredricks et al., 2004, p. 63). Emotional engagement duplicates an earlier body of work on attitudes, which examine feelings towards school such as liking or disliking school, the teacher or school work; feeling happy or sad in school; or being bored or interested in school work. Emotion also includes interest in and valuing schooling. Indicators of emotional engagement include student-teacher relationships (whether students get along well with teachers or not) and the value placed on school and schooling (such as maths will be useful in the future and satisfaction with school because learning is taking place) as well as an orientation towards work transferable skills and attitudes (sticking to tasks and maintaining an interest in things that take a long time).

The cognitive dimension seems to centre on student beliefs related to self, school, teachers, and other students. Cognitive engagement depends on the use of intelligence and thinking. It incorporates the idea of investment, like thoughtfulness and willingness, to exert the effort necessary to comprehend complex ideas and master difficult skills (Fredricks et al., 2004, p. 60).

Cognitive engagement is defined as being strategic or self-regulating. Strategic students use meta-cognitive strategies to plan, monitor and evaluate their cognition. They use learning strategies such as rehearsing, summarizing and elaborating to aid memory, organize and understand material (Fredricks et al., 2004, p. 60). Indicators of cognitive engagement are self-monitoring, exchanging ideas, giving directions, justifying an answer, using learning strategies and control strategies, evidence of persistence; relating the task to prior knowledge, requesting clarification and using analogies as measures of cognitive engagement.

Behavioral engagement encompasses doing the work and following the rules; it includes student observable actions or performance, namely participation in extracurricular activities, completion of homework, as well as academic achievement. (Fredricks et al., 2004, p. 65).

3.2 Different levels of Engagement

In schools, students can be engaged at two levels (Munns & Martin, 2005, p. 3).

The first is small "e" engagement. Although engagement at this level is recognized as having cognitive, emotional and behavioral components, Fredricks et al., (2004) argue that these components do not operate in isolation from one another. They contend that engagement is when the behavioral, the emotional and the cognitive come together powerfully (Fredricks et al., 2004). It means that classroom behavior is not just following rules but actively participating; emotion is not just liking but deep valuing; cognition is not just simple memorization but reflective involvement in deep understanding and expertise – in other words, high levels of doing, feeling and thinking (Munns, Arthur, Downes, Gregson, Power, Sawyer, Singh, Martin & Steele, 2005, p. 27).

Small "e" engagement is divided into substantive engagement and procedural engagement. Substantive engagement is when students are "in task" or students are strongly engaged in the tasks they have been set. Procedural engagement is when students are "on task" or when students are simply obeying the wishes and instructions of teachers. Substantive engagement is a sustained commitment to the content of schooling, which is similar to cognitive engagement. Procedural engagement is trying to complete task requirements, which lasts only as long as the task itself (Fredricks et al., 2004, p. 67).

The second level is big "E" engagement. It differentiates itself from small "e" engagement because of its wider relationship with schools and education generally. Big "E" engagement is in operation when students have a sense that school is a place for them and that education is worthwhile as a resource they can use both now and as future needs (Munns & Martin, 2005, p. 3). Students realize that education is a "resource that they could profitably deploy in their present and future lives" (Munns, 2004b, p. 2). "Big "E" Engagement is an emotional attachment and a commitment to education: the belief that "school is for me"" (Munns, 2004b, p. 3; see also Abowitz in Munns, 2007, p. 305).

Munns and Martin (2005) suggest there is a “temporal and embedded” link between the two levels of student engagement: ... the daily engaging experiences in classrooms that provide opportunities and support for students to think hard (high cognitive), feel good (high emotional) and actively participate (high behavioural) develop to a powerful “school is for me” relationship (Munns & Martin, 2005, p. 3). Munn’s sociological view of engagement builds on and compliments Martin’s (in Munns and Martin, 2005) Student Motivation and Engagement Wheel. It also connects with classroom pedagogy and discourses as well as the wider school, education and social environments.

3.3 Chinese value on classroom engagement and its origin

A strong feature of Chinese learners is that they are self-disciplined. Chinese learners learn to concentrate their attention when in an educational context. They are able to focus on listening and observing and exert a tremendous effort to remember what is taught in class. Chinese learners adopted the image of “duck stuffing” (填鸭式教育, *tian ya shi jiao yu*) where teachers pour in and fill students (Jin & Cortazzi, 2006). It is the opposite of using student-centered learning strategies. Graham (2002, p. 2) argues that students are “not empty vessels waiting to be filled by the all-knowing teacher”. Hu (2002) describes this Chinese culture of learning as the four Rs (teaching patterns of reception, repetition, review, and reproduction) and the four Ms (learner behaviors of (being) meticulous, memorizing, (quiet) mental activity, and ultimate mastery). These educational beliefs on study performances are developed in early childhood as learners acquire the skills to commit the considerable time and mental energy necessary to master the 3,500 characters required by the end of primary school.

These learning strategies and habits stem from a Confucian heritage. Jin & Cortazzi (2006, p. 12) state that “the Confucian tradition defined practical approaches to learning as careful study of a series of texts combined with the practice of moral self-cultivation and are significant for modern socio-cultural attitudes affecting learning and communication practices”. Confucian heritage significantly influences teaching and study beliefs and our understanding of classroom engagement. They stress:

First, attitude to teachers. There is an old Chinese saying, “一日为师, 终生为父” (*yi ri wei shi, zhong sheng wei fu*) which means although a teacher taught me for one day, he or she would be regarded as my parent for the rest of my life. It indicates that in the relationship between teachers and students, teachers are regarded as an authoritative parent while students respond to teachers with total respect and obedience.

Second, efforts in study. Students are also encouraged to enslave themselves to work and study with efforts, since diligence ultimately outweighs intelligence. There is a popular saying, “只要功夫深, 铁杵磨成针” (*zhi yao gong fu shen, tie chu mo cheng zhen*). It means that “if you make enough effort, you can grind the iron pillar into a needle” (Jin & Cortazzi, 2006, p. 12). Consequently, Chinese people think highly of rote-learning or repeating what they

are to learn as a way of promoting understanding. Another old saying is “书读百遍, 其意自现” (*shu du bai bian, qi yi zi xian*). Literally, it means if you read a book one hundred times, you will eventually understand its meaning through repetition. Essentially, it means that if you internalize and memories the input, you will understand the meaning in reflective practice later (Jin & Cortazzi, 2006). On (1996, p. 36) argues that there are four basic components of learning according to Confucian tradition: “memorizing, understanding, reflecting and questioning”. Memorization precedes understanding and leads to deeper understanding.

Chinese traditional culture also emphasizes the importance of education. The huge population in China promotes a culture steeped in competition. Consequently, education is hugely competitive and students work hard to “emerge from the grass”. Teacher-centered teaching approaches dominated by rote-learning are efficient ways of educating large numbers of willing students where wastage from those who fall by the wayside is not a significant concern.

Such characteristics of Chinese teaching/learning cultures continues to influence modern socio-cultural attitudes, and linguistic and communication practices, including teacher-learner relationships and expectations in the classroom (Watkins and Biggs, 2001). A good teacher in China is usually defined to have a deep knowledge of subject matter; be of good character; be strict but fair; be well prepared; deliver lessons effectively, devoting lesson time to explanation and transmission of knowledge, with limited expectation of student interaction or questioning during the course of delivery. This leads to an epistemic model of expository teaching, requiring commitment and effort, receptiveness, and conformity on the part of learners (Hu, 2002).

By examining and comparing the Chinese and Western beliefs on students’ engagement, we find major differences lie in their perception of classroom teaching value or “quality”. Traditional Chinese requirements on the classroom engagement are generated from our value on efficiency (do more things in limited time). The knowledge accumulation and rehearsal after class is particularly emphasized. When in class, students’ listening means engagement for them because teachers will do the rest job of the knowledge transferring to achieve the maximum of efficiency. Thus the requirement on engagement is judged by behavioral performance. However, researchers from Western world show teachers should tend more to stimulate students’ interest and curiosity to explore knowledge and to enjoy this process. Thus their requirement of students’ engagement falls more on emotional and cognitive engagement.

4. Conclusion

There is no easy answer or decision to make as to which one is absolutely “correct” because that depends on the contexts students are in. But for modern educational reformers, knowledge is constructed by learners who relate new knowledge to their past experiences or existing cognitive structures (Bruner, 1993). Quality

teaching we want to achieve should advocate the use of hands-on activities, connectedness and group work and aligns with constructivist theory and student-centered teaching strategies, because classroom teaching is of high quality and effective only when most students, most of the time, are seriously engaged in the lesson or assessment activity, and when students display sustained interest and attention, rather than going through the motions. Quality teaching also means students are enabled to benefit from work of high intellectual quality. One of the most important roles of the teacher is to scaffold students' learning by stimulating and coaching them. What teachers need to do is providing a learning environment that encourages students to work towards big "E" engagement (Munns & Martin, 2005).

Hence, quality teaching is advocating student-centered teaching and learning that stimulates student engagement from the classroom to the school level and beyond. For the sake of the pursuit of quality teaching, teachers first need to have a swift change in "engagement" and then they need to be aware in the following two areas:

4.1 Proper selection of Teaching Strategies

Teaching strategies have a great impact on student classroom engagement. When teaching strategies are appropriate, students are more likely to be engaged. There are different types of language learners. Therefore, to engage students, teachers should use different kinds of teaching strategies to meet the different needs of students (Barry & King, 1998; McInerney & McInerney, 2002). Pedagogically, there are a large number of approaches to teaching and learning. When a teaching approach is used it directs the teacher towards the selection of particular teaching strategies. Language teachers are then able to select from a variety of teaching strategies while implementing a particular approach. These include: Grammar-translation, the Direct Method; Presentation, Practice and Production (PPP); Communicative Language Teaching (CLT) and Task-based learning (TBL) (Harmer, 2007). The first two teaching approaches described above are more teacher-centered. On the other hand, the last three approaches described above are more student-centered approaches and consistent with enhancing student engagement.

In a contemporary Chinese educational context, a range of student-centered teaching strategies should be employed in our teaching. They include group work, student discussions, individual and group internet research, reading comprehensions, etc. They were selected according to lesson content and contexts. The integration of these various activity-based teaching strategies interest students, arouse their curiosity and enhances the interaction between student resources and the teacher. The use of a variety of teaching materials and teaching strategies are designed to engage students in learning English.

4.2 Adoption of necessary scaffolding

Scaffolding is an effective teaching strategy. The purpose of scaffolding is to provide experiences upon which students can base further learning. Van Der Stuyf (2002) argues that learners use their

prior knowledge to inform new learning. Positive teacher scaffolding encourages students to interact with new knowledge. Scaffolding helps students to learn and build their confidence to face new challenges. Scaffolding also minimizes learner frustration because they can relate more easily to new learning, which made the pavements for the students' engagement in classrooms.

Though scaffolding is time-consuming and even challenging if there are large numbers of students in a class, and it also requires a high degree of teacher expertise (Therefore, teachers need to be trained to implement scaffolding), and student-centered teaching approaches require the teacher to give up some of their authority or control and to be tolerant of students' errors and be patient in scaffolding students' learning. Finally, scaffolding involves guiding teachers about how to teach and it is dependent on student background and the past experiences they bring to the classroom as well as teacher background and experiences. Therefore, the adoption of scaffolding in language class can make it possible for most students to get better engaged.

For an English teacher with Chinese background, it was hard to implement student-centered teaching strategies and to scaffold students in learning English since their entire education was dominated by teacher-centered teaching approaches. Scaffolding student learning and using student-centered approaches was quite foreign to them. However, in the present globalizing world, it is required to learn about and understand classroom engagement as well as student-centered teaching strategies and to incorporate them in our teaching practice because a dragooned, mechanically competitive schooling is no path to creativity and outcomes of excellence in the long run.

The purpose of paying attention to the real student engagement and employing student-centered teaching approaches is to place students at the centre of learning. It is not so much the strategy itself that is important but the intention to view students as the focus or centre of learning. In this case, then even if a teacher is not as effective as they would like to be, they will still be able to generate quality teaching and stimulate students' outcomes from a student-centered perspective.

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When the Family is at Risk, Where is Societal Cohesion?

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Abstract: A huge deficit of social cohesion appears to have inundated many societies today. In what has been described as the Arab Spring in parts of North Africa and beyond—from Tunisia to Egypt, and from Libya to Syria; the endless blood-letting between the Israeli and the Palestinians over the right of ownership to the homelands; the Al Qaeda international menace in Pakistan, Mali and a host of other beleaguered countries, and the Boko Haram fundamentalist terrorism in parts of north-eastern Nigeria can be shown to be the final outcomes of unbridled patriarchalism; which has labeled those parts of the world as “regions in upheaval”. Spiritual ambition, unending abstractions spurn by the world’s idealistic philosophies, and the eschatological doctrines or theories of end time propagated and promoted by the religions now beckon Armageddon.

Needless to say, the merciless onslaughts and pillaging of matriarchal rationality by patriarchal creeds encapsulated in the scriptures, has produced incremental aggressiveness and bellicosity which manifests in wanton destruction of lives and the abuse and rape of the womenfolk. Unfortunately, and contrary to what modern day feminism and affirmative action principle propagate, a return to matriarchal rationality with its tendency to valorize philandering and complacency with caring, loving and planting agrarian life-strategy, its impatience with abstract thought and its lack of capacity to produce mathematical and cybernetic-technological culture with its immense and dazzling results, is not even an option. But what is this? Is humanity doomed to a cataclysmic end then? Are we now totally clueless? Certainly not!

Luckily, Anyiam-Osigwe invites us to a re-awakening and a return to Pristine African orientation of family ontology—a path not taken which should be taken—to recall humanity from the derailment occasioned by the embarrassing Western sociology that pitches children against their parents in the guise of child right.

This paper argues that neither matriarchy nor patriarchy has absolutely secure foundation. A preoccupation with either to the exclusion of the other leads to a dead end. Thinking out of the box, signaled by Anyiam-Osigwe’s pontifications on family ontology, envisages producing a radical philosophical sociology of filial rationality that unites children with parents in bonded human community.

Key words: Patriarchy, matriarchy, Anyiam-Osigwe, family ontology, filial rationality, bonded community

Introduction

What has been presented in literature as the battle of the sexes in male-female interaction in modern times is the expression of a more fundamental and primordial contest of matriarchal and patriarchal rationality in the evolution of societies. From time immemorial, male-female interaction has often resulted in procreation—the bringing into being of offspring. But populations, to ape Malthus, are unprincipled (Malthus, 1798). Procreation does not follow any known rational pattern. It does not adhere to the rules of logic. With chemistry and opportunity, sex happens even between couples who may eventually dislike each other, and may not cooperate in the nurturing of the offspring—the outcome of the sexual act.

Consequently, mothers, naturally, took charge of their offspring; minding and nurturing them, caring and fending for them; accepting whatever the male was ready to provide as supplementary, often in return for more sexual gratification. For the most part, the need of the male was essentially the satisfaction of sexual hunger without obligation, if he can have his way. Each mother became the head of her family. Human society was peaceful, with emphasis on love and

caring, and devotion to Earth goddess and emotional attachment to offspring and the land as life was basically agrarian; but without rational thought and spiritual ambition, social relation was promiscuous, procreation was without restraint and life was undisciplined. It is thus that human societies were presumed to have evolved from matriarchies; matriarchy being a form of social organization in which mothers are the head of families.

But the primeval Brotherhoods (Kieninger, 2013b), it was alleged, had watched the development with disdain and being mathematicians and given to rigorous thought and the urge for precision and purity of mind, had worked out a providential plan prophesied in the Scriptures; which they handed down to the Cretan Minoans and the Jews in the form of a philosophy, a distinct religion and identity, being nomadic, aggressive raiders unimpressed by and unattached to the Earth Religions of their era.

Not long after this inauguration of patriarchal program by the Brotherhoods (ibid.), a seismic accident—a volcanic eruption—occurred in the north of Crete, making the region uninhabitable, thus dispersing the Cretan Minoans all over the neighbouring Mediterranean islands bringing them in contact with the Phoenicians and the Greeks and a host of other colonies whereupon they

introduced and propagated their inherited patriarchal culture of aggressiveness and spiritual and intellectual advancement.

While the Greeks produced a patriarchal philosophy of rational inquiry in quest of objectivity, the Jews produced a patriarchal conquering religion of ascetic discipline and devotion to a monotheistic deity called Yahweh who decreed all things in creation including the reduction of the female to a pitiable after-thought of whom the male should be wary if he must overcome spiritual and intellectual contamination. In Judaism, sexual intercourse was deemed to be a female conspiracy to entangle the male and bring him into sin and trouble with his creator. A sanction against adultery was visited only on the female as she was the conduit of Satan to lure men into sin.

Christianity and Islam are developments out of Judaism, sprung up, as it were, from Abraham's seeds of Isaac and Ismail. The Hellenic culture is the direct influence on Western European civilization and humanism. The Judeo-Christian tradition and lately the spread of Islam as well as the Hellenic culture resulted in the deification of patriarchy and the disempowerment of the female; creating the lopsidedness in social relations which has affected the collective destiny of humanity dangerously negatively; a danger now well articulated and hotly being contested by cerebral feminist epistemology.

The question that arises from all of this is: what are the consequences when there is either total male or female dominance of the human family since children—the future of the human race—are at the epicenter of this long drawn contest of matriarchy and patriarchy in the evolution of societies? Needless to say, the subtle matriarchal-patriarchal struggle for dominance over the centuries has unquestionably put the family at risk. And this brings us to Anyiam Osigwe's (2013) concerns for and pontifications on the over-arching need for the re-ordering of family values so well articulated in the document under discussion.

The major proposal for consideration in the Anyiam-Osigwe document on family values, in my view, is that there is a step embedded in ancient African family ontology which ought to be followed in corporate child upbringing which was not followed and developed for the benefit of the human race; which should be followed now to rescue Africa and indeed the world from the unquantifiable risks to which the family has been put over the centuries.

First, we must identify and articulate these risks, and also demonstrate how these risks have been at the root of social upheaval and rebellion throughout the ages. Secondly, we must identify the obstacles to a full-fledge return to the pristine steps in corporate child upbringing not taken, and propose a new form of rationality which anticipates and modifies the Anyiam-Osigwe thesis in the light of the cosmopolitan outlook of modern societies. Now, what are the risks to the family and how do they vitiate societal cohesion?

Crisis in the family and the consequences for society

The sociological truism that the family is the basic unit or

bedrock of society illustrates what happens to the latter if the former is disoriented or at risk. In communities where people are uneducated and uninformed, procreation and the nurturing and upkeep of children are accomplished haphazardly. That is why Reverend Malthus contended that populations are unprincipled and that human beings have a tendency to procreate themselves out of existence, like the goats in the Galapagos (Kieninger, 2013c). This situation is not only possible in primitive societies, it can be re-enacted in any stage of society if thought and attention are not focused on the human family. Besides, populations without knowledge of how to get things done rationally, scientifically, are also prone to diseases and disasters. In the past, for instance, large populations have been ravaged and wiped out by pestilences, or plagues like leprosy and epidemics like cholera; some of which were thought to be a manifestation of the anger of the gods. The Scriptures say that people perish for lack of knowledge.

Usually, uneducated and uninformed people are generally unruly, greedy and unprincipled; and they can act as they please, oblivious of the consequences of their conduct. They can breed without restraint and without provision for the survival of the offspring. A situation of this sort puts the human family at the risk of extinction; for being ignorant and uninformed, people were incapable of counting their blessings, like Tyre. And as the Scriptures (New World Translation of the Holy Scriptures – NWT) say (Ezekiel 26: 1-14), the people of Tyre perished for their greed, for their lack of understanding, and for their inability to count their blessings.

On many fronts today the human family is at risk—risk arising from ignorance, illiteracy, poverty and disease; risk arising from the nonchalance and planlessness of social regimes; risk arising from the breakdown of family values due to economic recession and loss of jobs by heads of families and loss of the father figure supported by social regulation in some modern western societies, and risk arising from embarrassing sociology that misconstrues child right for excessive liberty or licentiousness (see Kieninger, 2013a).

Risk arising from ignorance, illiteracy, poverty and Disease

A fundamental source of the risk to which the family is put arose from ignorance as to means and how to ensure adequate provision for the upkeep of members of the family, as people in pre-literate communities procreated without plan for the future of the offspring. And with little or no knowledge as to causes and effects, human life was nasty; and prone to afflictions from plagues and diseases, it was also brutish, solitary and poor, to ape Thomas Hobbes. Illiteracy, ignorance, poverty and disease are quintuplets from the same origin. Plagued by illiteracy and ignorance, the families procreated without restraint and were then saddled with the number of children they could not reasonably cater for; procreation was believed to be an act of God. Children were thought to be deliverances of providence which those who bred them could do nothing about. But how come that these deliverances or gifts of God could not be availed of adequate provisions for sustenance; and how

come that they were afflicted with ailments of all sorts?

With the passage of time, however, education brought its own enlightenment and liberation from ignorance. With knowledge of science and technology, family planning made it possible for people to be disciplined, apply restraint to their sexual appetite and plan the number of children they could have. In time, knowledge of diseases, causes and cure drastically reduced infant mortality and increased life expectancy. But only communities that received the enlightenment brought about by education and increased knowledge about causes and effects could benefit from family planning and the reduction of the burden of parenthood that comes with it. Illiterate communities continue to be plagued by diseases and ravaged by poverty as well as unplanned and unrestrained procreative propensity.

It follows from this that one way to arrest the risk to which the human family is exposed, would be to tackle the problems of illiteracy, ignorance and poverty which breed diseases. From this, it should be feasible to eliminate this form of risk to the family. Education liberates the family from illiteracy, ignorance, poverty and disease. Unrestrained procreation could not be an act of God; as the accompanying consequences could not be reasonably attributed to God either. For anyone who authors undisciplined procreation should have to take responsibility for all the consequences that flows from it. Now, what about the risk to the family arising from the callousness and nonchalance of social regimes—the failure of the state to act when it should act or to care when it should care?

Risk arising from callousness of social regimes

Perhaps, one of the sources of the greatest risk to which the family is exposed is the callousness, planlessness, and nonchalance of those who happen to be in control of human affairs, especially in the developing societies. Leadership confers on those who wield power the authority to act for the common good. Unfortunately, in many backward societies, leaders do not seem to understand the mandate of their office. Rather than create adequate opportunities for human advancements of all sorts, and thereby empower individuals who seek to raise families; the state transforms, in the hand of incompetent leaders, into a brutalizing factor; making it virtually impossible for families to thrive and fulfill their mandate as the bastion of the moral fibre of society.

In many a developing, backward, and failing states, state actors charged with the responsibility to regulate motives and ensure the proper functioning of society as regularized interaction, often compromise the integrity and the calling of their office and woefully fail to conduct themselves magisterially to achieve the purpose of the modern state, namely to act as the guarantor of the security and welfare of the people, as well as the promoter of civilized and orderly progress of society. From ministers of state through executive governors that perpetrate official graft down to the heads of state who lack the capacity to discipline the political class, and legislators who demand bribes from agencies of state to pass laws or

perform their oversight function, and the judges of the courts who hand out raw litigation deals and injustice rather than justice to ensure orderly and civilized progress in society; monumental economic recessions are unnecessarily provoked resulting in failure of corporations, loss of jobs and the attendant disintegration of family life and integrated labour relationships formed over the years.

When enterprises collapse for lack of management science discipline, analysts do not often look beyond statistics to confront the brutal facts and trace it down to the collapse of family values associated with the rise of modernity, industrialism, information communication technology and the spread of urban squalor. Industry watch and science do not associate failure of corporations and institutions to moral turpitude incidental to the debasing of primordial family ontology and values. When failure occurs it is often blamed on wrong data, inaccurate economic indices, and enemies of the state—spiritual or temporal. No one is willing to forage into the moral tapestry of society to unravel the ethical source of social, economic, political and spiritual malaise afflicting modern societies.

Unfortunately, the fundamental source of this mode of leadership failure at the level of the state has not been sufficiently canvassed and addressed in literature. The state, in many developing societies, is often nonchalant about the fate of the family; preferring to look away and leave the problem to fester from the individual, the family to the larger society. Not bearing in mind that the collapse of family values will, in time, take its toll on the social structure and even occasion the dissolution of society. The collapse of family values is as viral and as devastating of the social fabric as the scourge of terrorism currently tormenting the world. Yet, no serious attention is paid to the issue of how to re-invent the family by problematizing PARENTING and making it a mandatory subject of study in the school curriculum and as a requirement for being pronounced a fit and proper person and member of society.

It may be necessary to state, at this juncture, that advanced societies have been striving to transcend the circumstances that impose limitations on the family which predispose it to risk. A discussion of what has been done and continually being done to lessen the burden of parenthood and improve the task of child caring in modern societies shall be undertaken hereafter when we highlight the critical points of Anyiam-Osigwe's strident call for the re-invention of the "primordial community" and a return to the concept and culture of corporate child-upbringing characteristic of pristine African societies.

Some advanced societies have, needless to say, created safety valves and insurance against abject poverty; and have social regulations and surrogacy in place to provide and cater for vulnerable children and orphans. Advanced civilizations have even gone as far as using social legislations to support nursing mothers, by providing for maternity leave, care-giving centres and child bay in work places. But this does not and cannot replace proper care giving and love from natural parents in the peaceful ambience of the

home; which makes the reinvention of the family in the context of the community an imperative in the emerging world order. This is the point, I suppose, where Anyiam-Osigwe joined the hurly-burly and the advocacy for the resuscitation of family ethics and the re-invention of the primordial community and its integration into the global family (Anyiam-Osigwe, 2013). But this should be prefaced, in my view, with a discussion of the risk to the family arising from economic recessions.

Risk arising from economic turbulence and recessions

Economic recessions happen because of leadership and institutional failures. When recessions set in, citizens of the world suffer untold hardships with the severest backlash foisted on the family. In recessions, enterprises not built to last or businesses that are run as the spirit directs the chief executive, usually go under; with heads of families and bread winners losing their jobs, and society thrown asunder. In Syria, for instance, the banks directed depositors to go for only 10 percent of their total deposit within a short spell of time, as they have no money to pay their customers. A few months later, the country was plunged into a civil war, in which they are still embroiled.

Many European countries like Greece and Portugal including banks in America and Great Britain are asking for a bail out from insolvency occasioned by recessions that are largely the bye-products of fiscal indiscretion of chief executives whether of business corporations or of government institutions. Incremental misbehavior of people in enterprise and public corporations is at the root of all forms of recessions. And when recessions occur and people are thrown out of jobs as it often happens, families are the hardest hit—some lose their spouses to inability to cater for the family; inability to pay bills and fees; some lose their spouses to untimely deaths arising from ailments that did not receive medical attention for lack of means, and some fathers lose the respect of their wives and children for allowing themselves to be intricately wound up with failing states and corporations; such that the life of man becomes nasty, miserable, solitary and short.

Thus do modern cosmopolitan societies create their own squalor to breed miscreants, destitute, brigands and hooligans who inevitably become willing recruits, foot soldiers and cannon fodder in civil rebellion; to wreak even greater havoc to the already dislocated families, by killing and maiming; and by looting, pillaging, and raping? Unarguably, therefore, without disciplined people bred by disciplined families to build society as community and community as a global family, corporations cannot be sustained and jobs can neither be created nor be kept; and with a large population of youths and dislocated adults milling around aimlessly like Satan, society itself that failed to work out the destiny of families is even at greater risk of disintegration.

The moral fibre of society resides within the family. It is from the family that children are first taught the values and norms of society. If society must make progress in the positive direction,

remain cohesive and advance the cause of human civilization, it stands to reason that its most fundamental unit—the family—must be energized, empowered and re-energized to reconstruct the architecture of the global family and the world community. Unfortunately, efforts by the modern state to restore the dignity of the family are vitiated by its own social, educational, economic, political agenda and strategies that often contradict and sabotage its intentions.

The agenda of the modern democratic state is the propagation of the concept of freedom and its wholesale concretization even in societies that have not yet developed the thought habits to embrace and manage the ambivalence, and the distortions and contradictions inherent in the sociology of freedom; thus putting the family to even greater risk of total annihilation.

The risk arising from the sociology of freedom

Western education, with its concept of man and society, while unarguably creating enlightenment and liberation from bondage, paradoxically enthroned its own bondage and obstacles to true freedom. Man may be free, but the consequences of unenlightened choices are severe. Education need not create insatiable taste for members of society, for if it does it merely dismantles one form of bondage to create yet another more subtle and virulent bondage—the hopeless surrender to endless desires; a form of enslaving necessity.

In the analysis of the structure of modern society, western sociology teaches that whereas man is born free, he is everywhere in chains. The task of education is to culture the individual to break loose from the chains and fetters that bind him and dismantle all obstacles to freedom. Freedom comes from the full realization of the human potentials, and the task of modern state and its educational curriculum is to enable each and everyone to liquidate ignorance, dispel illusions and cultivate the intellect and flourish in any direction that he deems fit unencumbered by the trammels of orthodoxies, traditions and conventions. This requirement of freedom applies to all mortals irrespective of creed, colour, geographical origin and age. By this pronouncement of the western sociology of freedom, everyone is eligible—underage children, infants, civilized men and barbarians including all homo sapiens whether educated or uneducated, enlightened or unenlightened, capable of wise or foolish decisions.

By this sociology of freedom, the child has as much right as his parents; and the rustic young woman brought in from the country-side by a gentleman of means and cosmopolitan outlook has as much right as her mentor. For everyone is free and freedom is license; or equality of all mortals of all ages and of all sexes. But should freedom not be less muddle-headed; should it not be structurally interconnected with independence of action, a sufficiency of means; a competency? Should one who considers himself free not fully independent and fully accountable for his or her actions? Should a person who cannot foresee the consequences of his or her action be truly deemed to be free? This is where

sociology should seek the counsel of moral values. For, a conception of freedom independent of a capacity for authentic choices and moral responsibility will not only disrupt, as it has done, the vitality and vibrancy of the family—the acclaimed fundament of society; it will definitely tear society asunder, as it has done already. Societal cohesion could never be guaranteed when the family is at risk.

Caring and community as the new social harmony

Before we dwell extensively on caring and community as the new social harmony, it is appropriate at this juncture to highlight some of the critical points made by Anyiam Osigwe's conception of family ontology. He thinks that a path has been charted by the forebears and pathfinders of Africa on how to execute corporate child upbringing. Since the family, in what Anyiam Osigwe described as the "primordial community" extended beyond man and wife and immediate children to an ever-growing, ever-extending, relatives from both sides, to the entire community, he conceived the family in the fashion of conventional sociology as the elementary building block of society. The family is not the atomized nuclear family. The family extends beyond the nuclear to relatives; to kinsmen, to kiths and kin. For, if the family is atomized as the nuclear family and clearly differentiated from other families and other relatives, then the bond which holds society will snap as it has already snapped in modern atomized societies. The understanding of the family as intricately connected to community enables collective upbringing of children; enables community participation in child upbringing. In this understanding, the family extends to the entire clan, so every member of the clan is related by kinship ties. What affects one family within a clan affects the other. Since families are intricately connected within the context of the clan, it is then possible for the education of every child in the clan to be the concern of everyone. Any child who misbehaved was chastised and disciplined by any member of the community, different from his immediate family. And members of the child's immediate family felt happy and contented that their child attracted the attention of the community rather than get angry that the child was punished. In the circumstance, children were easily corrected and made to refrain from wrong deeds, as the eye of the community is on everyone. Moral instructions – the dos and don'ts – inculcated in the child by his family are reinforced by other members of the clan; by community. It is as if the primordial community made it impossible for the golden fish to have a hiding place because of the watchful omniscient eye of community on everyone. In spite of this, however, within the context of the pristine African community, there were a few individuals who transgressed community norms. And where such individuals are respected members of the clan, his conduct will diminish the vital force of the community. This is often divined to be so when calamity befalls the clan. And the identified culprit is prevailed upon to appease the gods or the offended spirit of the community. So, in the primordial community, it was not only the children that were expected to be morally upright. The demand for

moral probity is even more stringent for the adults or community leaders, who are expected to be custodians of the values of the community. So, there was an over-powering moral censor of the community. For, as children are checked by the ever-present adults in the clan against moral infractions so, too, were the adults under the watchful eye of the community spirits and gods. Thus, child upbringing within the family and the community was intertwined with moral training. So, as the individual develops from infancy to adulthood within the primordial community he develops side by side with the moral training of the community. In other words, morality was embedded in child upbringing.

The Anyiam-Osigwe proposal

It is this matrix of the primordial community that Anyiam-Osigwe proposes that the family can be reinvented in modern cosmopolitan societies. However, since the values which bound people together in the clan faded into the background as individuals got caught up in the web of cosmopolitan-urban existence, could we ever possibly recreate the family in the context of the primordial community?. In the modern urban communities, for instance, the once cherished values of chastity, honesty, integrity and respect for elders, and virtues like virginity of young maidens were quickly and easily eroded by the brutal realities of city life. But Anyiam-Osigwe thinks that a new world order constructed from the moral and corporate fibre of pristine African community is a feasible project. He cites examples of efforts being made through International Conventions, Protocols and Child Rights Charter, et cetera, as indicative that the concern for the well being of the family has become a global affair. He avers that while the advanced developed communities have put mechanisms in place to encourage families, reduce the burden of parenthood, assist with childcare facilities in public and private workplaces, and emphasize early childhood education, the developing and backward societies of the world are yet to come to terms with the new reality (ibid). In developing and backward societies, until very recently when foreign aid from the developed world had to be tied to childcare and concern for family planning, the governments of developing societies had paid little or no heed to the family concerns, oblivious of the fact that a disruption of the family, ultimately, extends to the disruption of the state.

Apart from the risks identified earlier, Anyiam-Osigwe acknowledges the fact that economic recessions and circumstances of unemployment and under-employment have taken their tolls on the family. Family lives have been disrupted by the search of spouses for greener pastures. And as couples struggle to eke out existence from harsh economic circumstances, children are left unattended. And where families could afford to engage care-givers, such as housemaids and nannies, the emotional and psychological needs of the child, which are best given by the mothers, are left unprovided for.

Early childhood neglect and stress put on the child by social

and economic circumstances of the parents manifest later in life in form of social deviancy and delinquency and, in much later life, outright rebellion against society. Thus, with Anyiam-Osigwe's signal-service from his family ontology, a thorough-going thesis can be developed on the correlation between child-neglect and social rebellion that has thrown many societies into anarchy today. The cue I have decided to take from this is that parenting is absolutely fundamental in creating a better world order. While the proposal on recreating the primordial community in cosmopolitan societies may sound like good music to the ear, the original African ontology that provided the bedrock of the extended family system has long been eroded by the realities of the modern state and thus consigned into the dustbin of history. In the first place, to begin to reinvent the family through corporative communities proposed by Anyiam-Osigwe, members of such communities would have to be siblings to be able to attempt some modicum of corporate existence and corporate child upbringing as well as a community of wives bound by a common moral outlook and heritage reminiscent of the primordial community. I do not see how people who come together to form a corporate community; from different social backgrounds; different parental orientations; different language groups; different socio-economic realities, in a cosmopolitan setting, can allow the practices of corporate child upbringing; a consensus of moral precepts and a philosophy of being your brother's keeper; of mutual aid and of reciprocal solidarity (Unah, 2002b: 265-276), can find their way into the hearts of cosmopolitan people.

The ontology that supported the extended family system is the ontology of hierarchy of forces; of interpenetrating and intermingling life forces, which has long been negated in the era of the destabilization of Western-European thought and humanism (see Unah, 2002a: 52-61). It is too late in the day to begin to preach restriction and regimentation of people's lives and conducts when the windstorm of freedom, almost bordering on license, has swept across the globe, upturning empires and monarchies; tearing kingdoms asunder and throwing many regions into anarchy. The Arab Spring is not too distant example.

Nevertheless, though it may sound as sociological nostalgia, the proposal to empower the family, reinvent society as community and as a global family so painstakingly articulated in the Anyiam-Osigwe document on family values, has energy and merit and deserves the attention of policy makers and governments. And I propose as addendum, a new form of rationality, which I think will bring us to the path not taken by human societies, which Anyiam-Osigwe thinks should be taken. It is the revival of family values through parenting, caring and feeling for children. I call it "filial-rationality". It states that showing love, care and feeling for offspring is the over-arching consideration in social relations. This is because when children are ill-trained they cannot adjust properly in society. And those who take it badly become disgruntled, disillusioned and disrespectful of social norms and values. For this set of people, the hypocrisy of society even adds insult to injury as they are quick to show that those who

pretend to be respectable members of society, the upwardly mobile people are, indeed, scoundrels; who are only struggling to make amends and cover up for crimes committed in the earlier part of their existence.

The danger to society in breeding disgruntled children who become hoodlums and miscreants because they are uncared for by immediate parents who did not have the capacity to do so is enormous and frightening. It is from this group that society creates its armed robbers and prostitutes; disgruntled people that public office-seekers recruit as their henchmen, thugs, insurgents, and if one may add, fundamentalist suicide bombers! Social regulation did not prevent their parents from having them. And once brought into existence, the powers that be, state actors, social regimes, treat them as other people's children and none of their business. Society refuses to care when it should and, thus, destroy the sense of community. In time, these ones graduate into rebels against society. And they largely constitute the army of major social rebellions in history.

Imagine if children were cared for; provided for; loved and cherished in their formative years! Where would ambitious power seekers recruit their insurgents from? Where would disgruntled politicians who want to make the state ungovernable because they lost political power recruit their insurgents or terrorists from? From these other people's children that society refused to care for. Not caring for; not loving children, is at the root of social rebellion. The problem arising from this is far beyond the issue of immorality and criminality, and extends to violent social rebellion. On the other side of the matter, those that are adequately cared for by parents; loved by parents and relations, especially the male children, turn out to be icons of society; ever more productive; ever more brilliant; ever more ready to add value to the world. Because their parents cared for them when they needed the care, they also care for the world. They are the ones who create value chains for the world.

In 1938, Harvard University selected 268 male undergraduate students and commenced the "longest running longitudinal studies of human development in history". The objective of the study was to determine as carefully as possible the factors that contribute most strongly to human flourishing. All sorts of things were factored into the study. Seventy five (75) years after, George Vaillant, Director of the study for more than three decades, published the findings (Vaillant, 2012) under the title, *Triumph of Experience*. The thrust of the report is that males who have adequate tender, loving care from their mothers in their formative years flourished more than others who did not have the benefit of such care. So, what does this show: loving, tender care for children – male children- deep emotional concern in their formative years by their mothers have a capacity to produce male achievers in all fields of human endeavour, who record monumental achievements before age 75. There is no evidence that any of them was involved in social rebellion. So, what the world needs more than anything else in ensuring a better world order is the empowerment of the family and the caring for offspring? There is here a recall of matriarchal rationality as supportive of a

peaceful world order. Nothing is said in the Harvard Report or the Grand Study about what makes for female flourishing. Again, we find here a hint of patriarchal rationality. So in one breathe, the study tries to recreate matriarchal rationality; and in another it tries to re-enact patriarchal rationality. Again, this is a lopsided study. However, the point made is not lost on us. That is, that well-cared-for children in their formative years will add more value to the world, reduce the risk to the family and usher in a better world order. This, we accept. But about the missing link; the contribution of fathers to human flourishing, is also omitted in the study.

Luckily, the 2010 UK Riots presented a scenario in which well over 1200 arsonists and rioters who perpetrated the riots were later apprehended, arraigned and sentenced by the British courts within a time frame of two weeks or so. It was then established that children from homes without father image, who felt that the world owed them a duty and a favour, were the perpetrators of the mayhem. Curiously, the British government, at the time, appeared to have a deliberate social policy of providing sustenance allowance or social welfare package for mothers that were estranged from their husbands. With the passage of time, immigrant Black and Colored population were recording serious marriage breakages because it favoured women who cashed in on it to collect social welfare benefits. The police were often invited by women at odd hours to dislodge their husbands and family heads for minor altercations. It was thus that the children grew big-headed and became a problem for themselves and society. Thereafter, the Prime Minister, David Cameron, was reported to have threatened to remove the social benefits. My information is that when he could not achieve that objective, he prevailed on the parliament to slash the benefit to single mothers. The point in this is that you need the male and female to ensure proper parental care or child upbringing. While mothers may give love and care and emotional support to the child, fathers characteristically instill discipline and sometimes, where necessary, apply the stick that removes the beast from the child. The scriptural injunction: "spare the rod and spoil the child" is not without merit (NWT, Proverbs 13: 24). Western sociology of freedom and child-right has long discarded with this. And this has given emotional aid and comfort to juvenile delinquency and social deviancy.

Our thesis, therefore, is that proper parenting, meaning the cooperation and collaboration of mothers and fathers is absolutely fundamental to proper and successful childcare and upbringing (Unah, 2009). When families are encouraged to sit down to love and nurture the children, especially in their formative years, bonded human communities and cohesive social order will naturally evolve. But this sounds utopian if unaided by social support system and social legislation; encouragement by the state and organized private sector for families to remain together is not negotiable. In addition to that, because of the severe consequences to the world of uncared-for children in later life, we think that the modern state has been sleeping complacently on a gun powder keg.

The state and the organized private sector should support and

empower families economically to make childcare a serious business. There should be family competitions and promotional programmes, where family teams could compete with other families and the successful families who demonstrate bonding are made to win prizes. It is already happening in some places. But I think that it should be proliferated and replicated all over the world. This is the carrot aspect where the family, as bedrock of society, is supported to remain bonded.

There is the stick aspect. People generally desire one thing and do another largely because of *akrasia* – moral weakness. The erudite apostle Paul once wrote: "the spirit is eager, but the flesh is weak." With moral suasion alone without the force of law, most human beings find themselves doing things that they regret afterward. When confronted with the social consequences of their conduct, they take solace in blaming the devil. Many families have more than the number of children that they can care for because of moral weakness. Thus, since people generally lack the moral fibre and stamina to see their wishes through in action, they need the aid and discipline of law to whip them in line; to force them to be free. If a man desires one thing and does another, it is often because what he desires is desirable, that is, if it has a positive social purpose. Those desires with positive social purpose that men are unable to actualize because of *akrasia* require the aid of social legislation or social engineering. But what can legislation do to the affairs of the heart? What can law do to redirect filial rationality and enthrone bonded human community?

Holding spouses accountable for their sexual conduct

While it may not be feasible to legislate on the affairs of the heart; while it may not be practically possible to legislate on who should love who or who should have sex with who; who should have a child with who, it is quite feasible and practicable for the law to hold people accountable for the consequences of their sexual behavior and choices. The Lagos state government in Nigeria has demonstrated recently that this can be done. The Lagos State law in this regard says that you cannot proclaim your inalienable right to have sex with whoever you like and run away from the consequences. Civilization will not allow that, only barbarism may allow it. In this regard, we call on the international community to craft family charters and conventions defining the sexual act principally as an application to the cosmic order or divine intelligence for a child or children that you are ready and willing to care for. And then prevail on governments of the world to introduce family orientation, parenting and childcare in the school curriculum, from elementary to tertiary education as a compulsory subject of study because it touches on the foundation of human existence.

Chaos-prone societies without adequate opportunities for human capital development and social support system for its population should be encouraged to become Malthusian in outlook. If left alone, unchecked by law, people may procreate themselves into trouble, and by extension, out of existence. If you breed angry

people all over the place, you are procreating yourself out of existence. What Reverend Malthus predicted centuries ago is happening in India, Iraq, Libya, Syria, North-Eastern Nigeria, and a host of other troubled nations of the world. Shouldn't unprincipled procreative propensities be restrained by law, to prevent the breeding of angry Homo sapiens who will, in time, turn against society and tear it apart? Let there be laws prescribing the number of children families can have and supported by the state. For troubled societies without means, it should be pegged at a maximum of two children, with a proviso that any additional child will attract economic cost to the parents. Fees will have to be paid by such parents to the state on any additional child to enable it provide adequate facilities and infrastructure for all citizens.

Conclusion

It seems pretty obvious that there has been a derailment of society from its fundament, its foundation. This fundament, this foundation of society is the human family. Not that anyone disputes the capacity of the family to construct the architecture of society. The point rather is that the family and parenting have not been accorded their pride of place by modern societies, though there are undeniable token efforts in that direction. The estrangement of the family from its primordial responsibility arose fundamentally from the age-long subtle contestations between matriarchal and patriarchal rationality in the development of societies, and this need not be so. If one connects chaos-prone societies to the disruption of families and the uncaring attitude towards children, then it becomes crystal clear that the neglect and disempowerment of the family is at the risk of societal peace and cohesion. The way out is empowerment of the family and social legislation and regulation.

The outcome of this, if rigorously worked out, would be the institution of filial rationality where adequate care and concern for the all round development of the child is the yardstick with which to measure the success of families, the vibrancy and cohesion of society and the legitimacy of state authority.

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On Application of BIM to the Project of Comprehensive Improvement in the Demonstration Part of Luohe River and its River System

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Abstract: This paper is report about a specialized BIM team who was employed to the complementation of the project of the comprehensive improvement in the demonstration part of Luohe River system. The team was responsible for the design development and the delicacy management of the construction project by means of BIM technology. Before starting the project, this team built a three-dimensional professional model for ancient buildings, landscape, construction, heating ventilation air conditioning, drainage and electrical systems by using related BIM software based on uniform standards. The bottleneck of information in the architectural field is able to be addressed in advance by taking advantage of the five characteristics of BIM technology, i.e., visibility, coordination, simulation, optimization and export.

Key words: Application of BIM, comprehensive improvement, demonstration part of Luohe, river system

Introduction

A specialized BIM team was employed to the complementation of the project of the comprehensive improvement in the demonstration part of Luohe River system, who was responsible for the design development and the delicacy management of the construction project by means of BIM technology. Before starting the project, this team built a three-dimensional professional model for ancient buildings, landscape, construction, heating ventilation air conditioning, drainage and electrical systems by using related BIM software based on uniform standards. The bottleneck of informationization in the architectural field is able to be addressed in advance by taking advantage of the five characteristics of BIM technology, i.e., visibility, coordination, simulation, optimization and export.

Project introduction

The project of the comprehensive improvement in the demonstration part of Luohe River system was implemented in the Luohe River in Luoyang, Heinan province. It consists of Luohe River and landscape segment of Chanhe Rive. Specifically, Luohe River mentioned in this project is only referred to the distance from Luoyang Bridge and Linan Bridge, with a length of 5.5 Kilometers. The landscape segment of Chanhe River is up to a distance of 3.2 Kilometers from the mouth of Chanhe River and Luohe River to the upper reaches of Chanhe River.

Such ecological management methods as ecological wetland, ecological bulkhead and pavement were applied to the improvement

of Luohe River. While the Chanhe River was governed by means of ecological dredging and landscape improvement. The whole project was comprised of sixteen landscape projects. The following parts of this paper displayed the application of BIM technology to 900 meters of the downstream of Chanhe River which was under construction, the Zhuying spot in Chanhe River and to the underground garage of the mall in the south branch of Luohe River.

The 900 meters of the downstream of Luohe River refers to a distance of 900 meters from the mouth of Chanhe River and Luohe to the upstream of Luohe, with a planning road to its West and a planning embankment to its East. The two sides of a river channel were mainly designed to be the retaining wall puls parts of relief. All these decorations and the surrounding landscape plants contribute to a picturesque scenery of hydrophilic walkways and bicycle path along the river.

The hydrophilic road was paved with the antique blue bricks made of concretes and various natural granites. With the landscape plants standing at both two sides, this road became classical walkways with fantastic scenery. The red asphalt paved and granite bricks on each side are a breath of colorful and stylish for the whole classic scenery of walkways. The combination of three major joints which consist of the stage with stone sculpture and stages with reliefs around the river and steps caved with sculpture over water and the pavilion along the reiver side make a connection with landscape roads and Chanhe River.

Numerous activities are available in here. Tourists can take a walk on the serene walkways to reveal themselves in the lush greens or marvel at the fantastic bike road or rest at the landscape pavillon.

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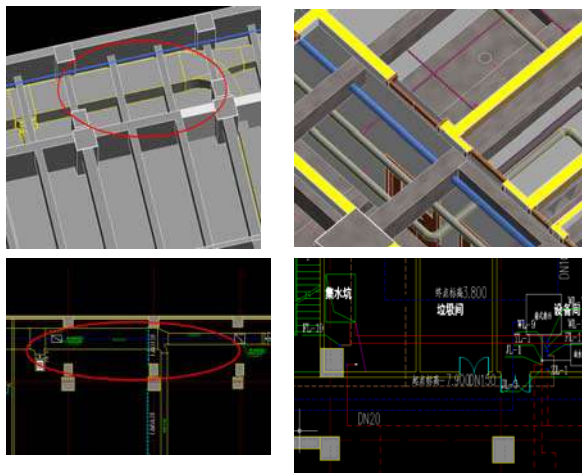
They are also able to take a walk on the steps over water to feel water flowing under their foot. Tourists will enjoy a ultimate relaxation. The Zhuying attraction lies in the northwest dike of the north branch of the Chanhe River, with its west to the mouth of Chanhe River and its north to the Luohe River. It is comprised of the Zhuying tower, Tuancheng pavilion and Tuancheng Bridge, of which the Tuancheng pavilion is opposite to the Zhuying tower, with the Tuancheng Bridge at their center. The Tuancheng pavilion is the one which is modeled on the patterns of Tang and Song dynasties, whose facade is designed with dripping eaves and roof built with eight beams. The pavilion base is built with steep stone plates and cornerstones. The doors and windows are also the style of Tang and Song dynasties. The doors are made of wooden and windows mullioned ones as the form of Tang dynasty. Every stage of this pavilion is decorated with brackets to support the outer eaves. The pavilion roofs are covered with gray pantiles.

The Zhuying tower is the loft-style wooden tower in the form of Song and Tang dynasties, whose facade are constituted with five stages and plane shapes like a n octagon. Each stage has six eaves and four bases. The tower bases are divided into two stages, up to 1m. The lower stage of the tower base is round with a diameter of 16.4 m. It is equipped with double dripping eaves and has four doors. Inserted with a dark story of one grade, the tower is five layers outside but actually nine layers inside. Brackets are installed above the second layers for supporting the tower roofs which are covered with ceramic pantiles. The top layers of the tower have an octagonal pyramidal roof with round pile caps supporting the top tower.

The project of the comprehensive improvement of the Luoyang river system should be completed with high quality so as to create a better environment for persons live in Luoyang province.

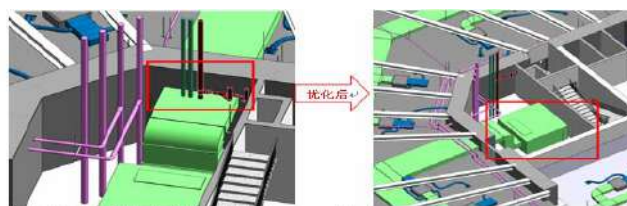
Specific application of BIM technology to the main items are as follows, including collision examination, optimization of the pipeline space, visual communication, simulation and roaming, simulation construction in four-dimensional space, exporting layout for the construction guidance, database, disclosure using three-dimensional technology and comparisons of alternatives of three-dimensional project materials.

Application one: collision examination



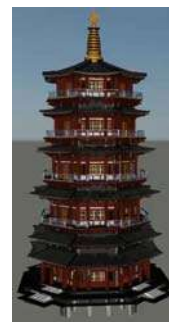
The traditional examination for construction drawing is completed based on the identification and review of professional computer aid design (CAD) construction drawing. It is complicated and hard to discover the flaws of a construction drawing. A collision examination was made to the sunken plaza. Contradictory results were found in the total value of collision between the architecture and construction, constructions, electromechanical equipment and construction and electromechanical equipment. The elimination of collision points during the implement of project promotes the working efficiency. The collision points found in indoor and base plates were 167 and 25 respectively, of which 52 collision points are severe.

Application two: optimization of pipe lines



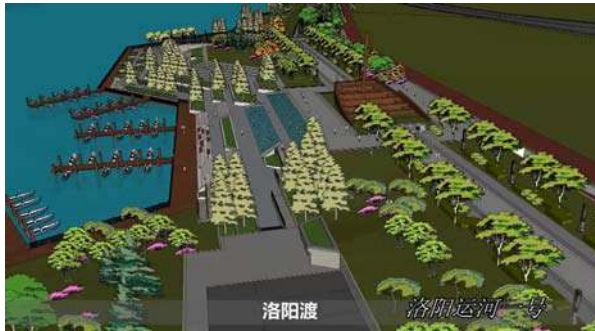
The pipe lines were optimized to meet the requirements of construction after the collision examination for the sunken plaza completed. Therefore, stuffs in the project department are free from the two-dimensional design. As a result, great progress has been made in engineering design due to the higher design efficiency and lower design error rates and less waste of financial and material resources.

Application three: visual communication



There is a distinctive feature found in antique buildings that certain a rule can be followed despite of a complicated structure in details. A direct observation to the inner structure of the building and brackets, roof catches are available through cutting the three-dimensional model of Zhuying tower at any angles. Hence, it not only enables the designers to confirm the design intention but provide the visual technological support for the modification of design concepts in a three-dimensional space, which helps engineer guide the construction on site both from sensory effects and identification.

Application four: discussion on the roaming simulation program and the trace of BIM information



BIM3D roaming is applied for the three-dimensional simulation of physical architectures by means of virtual reality technology. Take the roaming simulation of 800 meters of landscape in Chanhe river for example. The landscape is able to be observed from any angles, distance and sophistication degree in the virtual environment by using the BIM roaming technology. The vegetation can be designed more reasonably through changing the picture of plants in different seasons.

The air roaming made to the whole picture of landscape is intended to refine the major and minor points of the landscape and sense the comparison of spatial structure of the landscape. The issues of space sequence and organization are related to the global governance of the overall structure and layout of the landscape. The roaming method was used to link all isolated point in the Chanhe landscape, a length of 800 meter, to allow the construction personnel to have a overall cognition of the landscape.

BIM3D roaming technology still can provide highly valuable information for the field of project security and quality control. The application of roaming technology allows constructors to find the dangerous factors and come up with reasonable solutions. An optimal construction scheme was made on the issue of the reasonability and security of the temporary edges. A consensus was reached that security precautions should be taken by fastening the temporary edges with bolts in a welding way and a reality roaming simulated in the built model by taking advantage of such BIM roaming functions as the weight of virtual person and collision. The layout of landscape therefore can be redesigned to effectively and completely prevent from potential security risks. Besides, the BIM3D roaming has characteristics of direction, convenience and traceability in information simulation.

The model information manager was included in the BIM team, responsible for the inputting of construction information. A detailed construction diary can be made through recording such items as the time for the casting of walls, the prefabricated time for the antique architecture and the acceptance results of construction of the antique architecture. It is available to check or trace of the construction information at any time during the process of model roaming. A analysis to the whole project can be made directly through the statistics and comparison of construction information.

Application five: 4D construction simulation

The virtual construction function of NAVISWORKS was employed to make the visual animated simulation for details of complicated construction of the Tuancheng pavilion and Zhuying tower from different angles which were demonstrated step by step with a clear review to construction techniques. As a result, construction techniques and programs are understood in a more direct manner, contributing to avoiding blind construction and resulting in a remarkable progress in the controlling of project quality. With the help of the virtual construction function of NAVISWORKS and by taking advantage of simulation, many cases can be identified to determine whether the general layout is reasonable or it is the right time to remove such large equipment as construction lifts or whether segmentation or partition of construction is flexible. Therefore, problems found can be optimized rationally, which ensures the perfect implement of the project. The construction schedule can be checked by using the comparative function of the planning and actual schedule of the navisworks during the period of construction so as to secure the normal implement of the construction

The comparative function of the planning and actual schedule of the navisworks was used to check the construction schedule during the period of construction so as to secure the normal implement of the construction through comparing and analyzing the schedule of construction so as to eliminate the negative effect brought by the abnormal construction schedule.

Application six: export for construction guidance

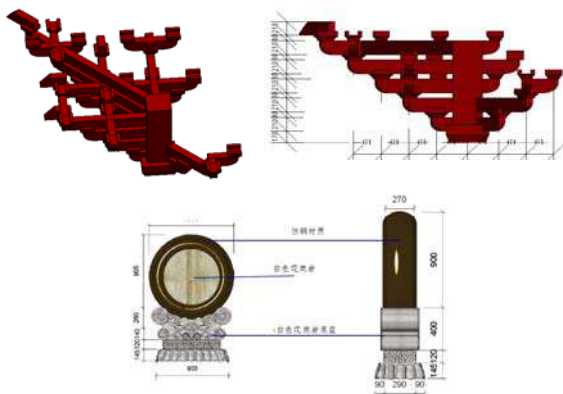
It is hard to implement the reinforcement and roof construction as the cornice of Zhuying tower is hyperboloid. While three-dimensional models of detail and axonometric drawings of the reinforcement exported by means of BIM model and the main points of quality control provide on-the-spot guidance to construction workers in a direct manner, which makes workers from construction mistakes and omissions due to the failure of thorough comprehension of construction drawings. With the implementation of collision examination and optimization of clear height as well as roaming, the size, position and elevation of BIM model were defined. Therefore, the layout of construction for guidance and the drawing of preserved holes are able to be observed in BIM model, which is free from repetitive holes and is cost saving with a short project implementation. A comprehensive dimensional layout and professional plane drawings of drainage sprinkler should be made in the drawing administration area of the software so as to label the system type, section dimension, elevation and position to ensure the guidance of the layout to the construction. The CAD drawings exported, a complete construction picture with labels, are used for guidance to construction as they have distinctive labels and concise and simple images. Sectional drawing of local complicated construction area can also be exported or printed in a three-dimensional space so as to provide further aid to constructors to understand the construction intention. Thus an accurate

implementation of the construction project was ensured.

Application seven: the application of BIM database

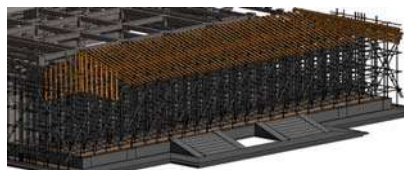
The failure of obtain numerous engineering database to support the resource planning is the root of little chance of achieving the delicacy management of construction enterprises, resulting in the prevailing of empiricism. Consequently, undesirable phenomena are aroused, such as disorganized production management of the project, discrepancy between the purchase amount of engineering materials and supplies inventory and the actual demand on site, and uncivilized safe construction. The pavement required and complicated abnormal structure of the antique architecture, such as the hyperboloid roof, lead to a difficult manual calculation with lower precision. The function of BIM database is employed to withdraw the amount of concrete needed by the floor construction, the electrical pipelines, pavement required for the landscape and materials demanded by the antique architecture so as to provide basic database to the project department for the preparation of construction materials. It enables the managers to obtain basic data needed by the project rapidly, which greatly helps the constructional enterprises to develop a talents scheme so as to remarkably reduce the waste of resource caused during the process of logistics and warehousing and provide technical support for the success of controlling the ceiling of materials consumption. The core competitiveness of project management has been promoted as the project data can be withdrawn from BIM database in a rapid and accurate manner.

Application eight: explanation in a three-dimensional space



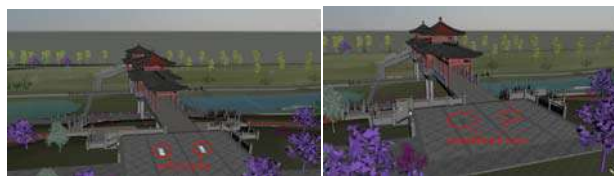
The antique architecture in this project has characteristics of complex construction, sophisticated technology and diverse carving patterns of landscape pieces. A three-dimensional explanation atlas made by the BIM team has labeled a three-dimensional measurement and interpreted the construction methods and precautions of the antique architecture and landscape pieces by means of disassembly.

As a result, constructors have a direct cognition to the structure of the antique architecture and precautions of landscape pieces so as to deeply understand drawings intention and improve the construction quality.



A three-dimensional design and explanation was made for the construction of abnormal roof formworks and beams and plates formworks of the antique architecture. Therefore, construction managers and operators can have a better understanding of the above formworks which are able to be sectioned at any angles. It facilitates to enhance the efficiency of on-the-spot construction. A visual three-dimensional explanation at the scene is made by using BIM internet IPAD technology, which can directly represent the construction techniques and ensure the on-site construction to be complemented in accordance with the construction scheme.

Application nine: comparison of three-dimensional schemes for material item



The selection of materials for the antique architecture and landscape in this project should be strict as it determines the overall impression of landscape. BIM team has showed the real materials provided by different manufactures in the three-dimensional mould to allow the project department, supervision, designers and owners to analyze material schemes and discuss the selection of materials. Thus, there is no need for project department to make physical samples as constructors, supervisors, designers and owners have a real perception of patterns of antique architecture and landscape pieces, which is not only cost saving but convenient for the project department to select materials.

The application of BIM to the project of comprehensive improvement in the demonstration part of Luohe River system makes the delicacy management of the project possible, which enhances the working efficiency, shortens the construction schedule, saves cost and reduces the waste. As a result, remarkable progresses have been made in construction schedule, quality and cost.

On Double-front-axle Linkage Suspension Dynamics Simulation of a Truck

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Abstract: A full truck with the linkage suspension has been established in ADAMS to study the double-front-axle linkage suspension dynamics performance. The stresses on some joints of the suspension can be obtained by the simulation of the full truck passing a twist road. A test has been done to exemplify the method. The relative error between simulation results with actual testing results is less than 5%, which verified the correctness and feasibility of this method. The method can provide valuable experience and inspiration for suspension optimal design and boundary conditions for strength calculation.

Key words: linkage suspension; ADAMS; dynamics simulation

Mercedes-Benz has developed the double-front-axle linkage suspension for heavy trucks in the nineties of last century. The purpose of this design is to solve faults of BENZ ACTROS 8×4 series truck produced in the eighties (Li, 2007). The main problem is the axle loading inequality between the first axle and second in double-front-axle linkage suspension. Due to the degree and direction of suspension deformation change with the different running condition, the motion relationship among the parts of double-front-axle linkage suspension system is very complicated and theoretical computing also can't work well. For example, the design axle loadings are 7.5t (the first bridge) +7.5t (the second bridge), but the actual loadings may become 6.4t (the first bridge) +8.6t (the second bridge). The consequence is that a stronger brake force for the second bridge caused tires to wear faster.

The double-front-axle linkage suspension (as shown in Fig. 1) which is introduced in this paper, can make a balance between two front axle loadings, avoiding the second bridge tires wearing faster and preventing the occurrence of axle overloaded in bad road conditions. So we can reduce the number of leaf spring piece, even do not needs extra strengthen protection. The linkage design protects the suspension system, steering system and tires, also improve the driving comfort (Zhuang, 2011).

Now, the double front axle loads automatic balance system has been widely used in BENZ products, domestic research in double-front-axle linkage suspension just start. There is no mature product with this construction. Japan's Mitsubishi has done some promotion for this structure and gained an effective result (Li, 2007).

In this paper, the structure and function of the double front axle linkage suspension was presented, then a model and simulation were done by ADAMS. The relative error between simulation results with actual testing results is less than 5% through the simulation of

the full truck passing a twist road, which verified the correctness and feasibility of the simulation model and method.

1. Brief of linkage suspension

1.1 The structure of linkage suspension

Fig.1 shows the structure of one-sided double-front-axle linkage suspension which is made up by first axle leaf spring, second axle leaf spring, eyes, shackle, linkage arms and linkage rod etc. The red line represents the frame; AKB and JLI represent front and rear leaf spring; eyes AA1, DD1, JJ1 and GG1 were fixed with frame; linkage arms CDE and FGH can rotate each other around the point D and point G; the ends of the lug CB and HI is active hinge structure; EF represents linkage rod. Multi-body dynamics model of double-front-axle linkage suspension as shown in Fig. 2.

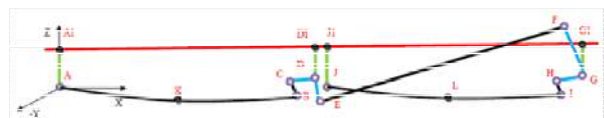


Fig. 1 The double-front-axle linkage suspension



Fig. 2 ADAMS model of double-front-axle linkage suspension

1.2. Working principle and process of linkage suspension

A truck without linkage suspension in the state of nature showed in Fig. 3. A truck without linkage suspension driving through a step, and axle loadings showed in Fig. 4. A truck with linkage suspension driving through a step, and axle loadings showed in Fig.

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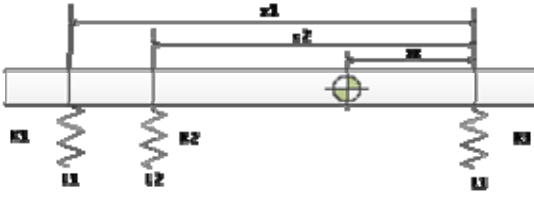


Fig. 3 A truck model without linkage suspension in the state of nature



Fig. 4 A truck without linkage suspension driving through a step

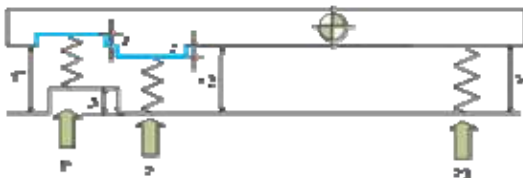


Fig. 5 A truck with linkage suspension driving through a step

The heights of upper point of each leaf springs are calculated by formula 1, when a car without linkage suspension driving on a step.

$$\begin{aligned} Y_1 &= L_1 - \frac{P_1}{K_1} + A \\ Y_2 &= L_2 - \frac{P_2}{K_2} \\ Y_3 &= L_3 - \frac{P_3}{K_3} \end{aligned} \quad (1)$$

Where,

Y_1 、 Y_2 and Y_3 respectively is the height of first bridge leaf spring, second bridge leaf spring and rear bridge leaf spring; L_1 、 L_2 and L_3 respectively is the three leaf spring's natural height, K_1 、 K_2 and K_3 , P_1 、 P_2 and P_3 respectively is the three leaf spring's stiffness and loading.

Torque can be calculated as,

$$Mg \times X_c = P_1 \times X_1 + P_2 \times X_2 \quad (2)$$

The algebraic equation for this model is:

$$(X_1 - Y_1) / (X_2 - Y_2) = X_1 / X_2 \quad (3)$$

The gravity of truck equal to sum of P_1 、 P_2 and P_3 :

$$P_1 + P_2 + P_3 = Mg \quad (4)$$

From the above equation, the loadings of each axle P_1 、 P_2 and P_3 can be calculated. If the truck without linkage suspension, then, $P_1 \neq P_2$, the loadings of first axle and second axle are uneven.

If the truck with linkage suspension, then, $P_1 = P_2$, the loadings

of first axle and second axle are even. Using $L1-Z$ to replace $L1$, $L2-Z$ to replace $L2$, from the above equation, we can calculate Z .

2. Virtual Prototype Model

This paper utilizes the intersection point of symmetrical plane of first bridge, upper surface of frame and symmetrical plane of frame as the coordinate origin. From this point to rear truck is the positive direction of X , from this point to right is the positive direction of Y , upward is the positive direction of Z , and the model was built according to this hard point coordinates. Parts' size and location were determined by the actual size and assembly relationships. We can transfer CAD model to the format of $.x_t$ by using Pro/E, then import this file to ADAMS.

The full truck model was simplified and consisted of three parts.

Where,

2.1. Front leaf spring, rear balanced suspension;

2.2. Frame、front linkage suspension system and steering system;

2.3. Tires and road.

2.1 Front leaf spring, rear balanced suspension

The leaf spring is a suspension element that uses one or more leaves to support the sprung mass of the vehicle. This is modeled as a series of discrete parts connected by beam elements. Contact between the leaves is modeled with vector forces. Rear leaf spring's forces and torque is modeled as six-component forces, and vertical stiffness can guarantee consistent with spring. Front leaf spring and rear balanced suspension are showed in Fig. 6. (Li et al., 2013; Ji, et al., 2016; Peng, et al., 2013; Zhang et al.2014; Zhao et al., 2015).



Fig. 6 Front leaf spring and rear balanced suspension

2.2 Frame、front linkage suspension system and steering system

Frame model produced by transferring Pro/E model with the format of $.x_t$ into ADAMS. The coordinates of hard point's position of linkage suspension, steering system were measured by the three coordinates measuring instrument. According to the principle of ADAMS parametric modeling, dynamics simulation model is set up. The model of integrate frame with linkage suspension mechanism as shown in Fig. 7 (Jiang et al., 2015).



Fig. 7 The integration model of the frame

2.3. Tires and road

The tire system template references a tire property file for each wheel part. The tire property file is PAC tire, stored the tires.tbl directory of the Adams database. The road system also was built with a tire property file, which references a road in NingXiang proving ground in Hunan province. As shown in Fig.8, the tires and road model, the twist road with a 200mm bump (Gao et al., 2012).

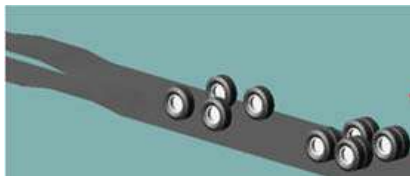


Fig.8 the tires and road model

2.4. ADAMS full truck model

Above three models together with cab, engine and other parts simplified as lumped masses are grouped together to form a full truck model. Each lumped mass should have the same mass and

moment of inertia as its part have. The simplified method can simulate force action and reaction between the frame, leaf spring, axle, tires and road (Mahmoodi-Kaleibar et al., 2013; Li et al., 2013; Tang et al., 2013; Feng et al., 2016; Li, 2015).

ADAMS full truck model is shown in Fig. 9.

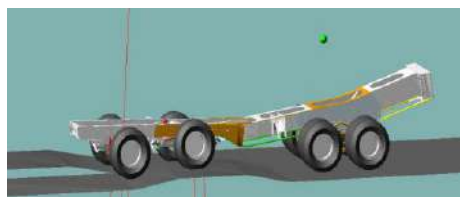


Fig. 9 ADAMS full truck model

2.5. Model parameters

The prototype truck is a four-axle truck with total mass of 59.520t, and its centre of gravity and wheelbase are shown in table 1. Other parameters of prototype truck are shown in table 2.

State	Height of mass center from the ground (mm)	Distance of mass center away from first axle (mm)	Distance of mass center away from symmetrical plane of frame (mm)	Wheelbase(mm)
full load	2166	4604	2.8(left)	1850+3700+1350

Table.1 Centre of gravity and wheelbase

Item	Torsion stiffness of antiroll bar (N·mm/rad)	leaf spring stiffness (N/mm)	Arc high of spring in freedom (mm)	Type of tire
Parameter	2.1×108	1000	110	12R20

Table.2 Other parameters of prototype truck

System simulation is completed in lowest stabilized speed of the truck travel through the twist road. The effect of vibration of engine and some other systems is ignored. In the experiment, the principle of weight is that the required position of mass center is the

same as the truck, and the loading of each axle is the same as the real.

The difference of axial load, full truck weight measured by testing and simulation is minimal, as shown in table 3.

Axial load, full truck weight measured by testing		Axial load in model	
First axle	Second axle	First axle	Second axle
32.8% (19516/59520)	67.2% (39997/59520)	20600	39320

Table.3 axial load and full truck weight

3. The whole truck simulation

The simulation was the whole truck totally travels through twist road with a speed of 10 km/h in 50s. The following Fig. 10 shows the force action relationships between the linkage arm and linkage rod.

The force relative to time of left linkage rod ball joint can be achieved through the simulation and showed in Fig. 11, and the right force showed in figure Fig. 12. Simulation experiment shows the maximum force of left linkage rod ball joint is 50661N; the maximum right force is 51191N.

Where maximum forces of linkage rod ball joint appear at the truck elevated diagonal tires. That is, the force of left linkage rod ball joint appear the first and second axle's left tires on the convex, the third axle's right tire on other convex, the fourth axle's right tire

on the ramp.

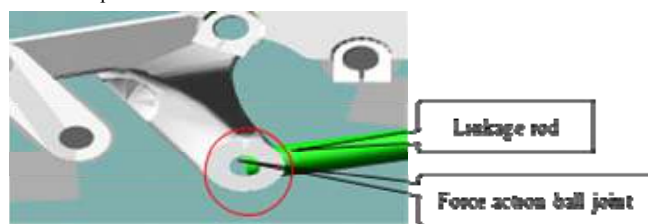


Fig.10 The schematic diagram of left linkage rod

In order to avoid spring mass made a rapid drop due to gravity, at the beginning of simulation, we should add an upright force on the mass center, which receded in 5 seconds. If the balance force doesn't add in the model, the simulation may become difficult to conduct or may even fail. The force relative to time of left linkage rod ball joint showed in Fig. 11.

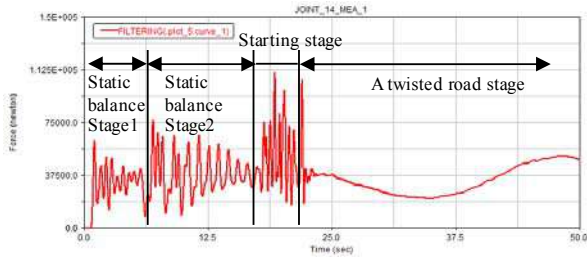


Fig. 11 Free-body diagram of left linkage rod

4. Stress test of linkage suspension

4.1 Brief introduction of test

Because the linkage rod is two-force bar and its section shape is hollow cylinder, so the force of linkage rod ball joint can be calculated by testing stresses along the axis.

The main equipment including TDR data acquisition system, strain gauge(120Ω), computer and multimeter and etc. Stresses test showed in Fig. 12, there are two test points placed at each end of the linkage rod to guarantee the testing accuracy.



Fig. 12 Stress test of linkage rod

4.2. Test process

In order to make the test's starting conditions consist with the simulation, the truck should be jacked up on the front and middle with four hydraulic jacks. Consequently the linkage suspension doesn't subject to the force from the spring mass, and test data are good agreement with the simulation results. The test process is showed in Fig. 13. When we make the jacking force disappear in flat ground, we can calculate the balance force from the stresses. Then we zero the strain gauge, and measure the additional stress when the truck travels through twist road.

The test route adopted in this paper: truck jacked up (full load) → zero the strain gauge → collect the data → uninstall middle hydraulic jacks → uninstall front hydraulic jacks → zero the strain gauge again → full truck travels through twist road.



Fig. 13 Test process

4.3 Test results

Experimental strain-time curves are showed in Fig. 14 and Fig. 15. Fig. 14 shows the results when uninstalling the middle and front hydraulic jacks; Fig. 15 shows the results when the full truck travels through twist road.

Through the process curves are smoothed, we can find the maximum forces of linkage rod ball joint appear at the truck elevated diagonal tires, which is the same as the simulation.

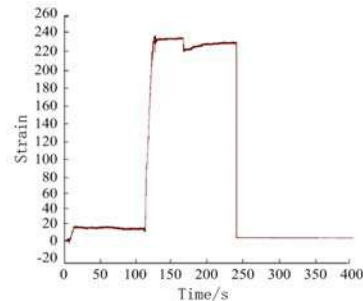


Fig. 14 Results when uninstalling the middle and front hydraulic jacks

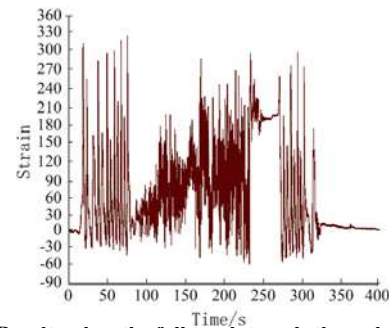


Fig. 15 Results when the full truck travels through twist road

Total maximal stress of linkage rod = Maximal stress when uninstalling the front hydraulic jacks + Maximal stress when truck travels through twist road. The numerical results are shown in Table 4.

Position	Maximal stress when uninstalling the middle jacks / MPa	Maximal stress when uninstalling the front jacks / MPa	Maximal stress when truck travels through twist road / MPa	Total maximal stress of linkage rod / MPa
front-left	5.69	30.16	36.58	66.74
rear-left	9.14	26.85	44.41	71.26
front-right	7.32	35.04	35.87	70.91
rear-right	9.65	36.37	38.72	75.09

Table.4 Numerical stress results

5. The simulation and experimental contrast

The linkage rod is two-force bar and its section shape is hollow

cylinder, the outside diameter of 50 mm, inner diameter of 40 mm. The forces can be calculated from stresses multiply by cross sectional area.

Position	The front-end force/N	The rear-end force /N	Mean value /N
left	47152	50346	48749
right	50096	53052	51574

Table.5 shows the forces of lineage suspension from test

Position	Results of test/N	Results of simulation/N	Relative error
left	48749	50661	3.9%
right	51574	51191	0.7%

Table 6 shows the errors between simulation and test

By comparison, simulation results are close to actual measuring data of test, the relative errors between the simulation values and the test values are less than 5% both on the left and right. Simulation and analysis results are confidence, and it provides a reliable dynamic model for the engineering design. The optimal design is also can be conducted by this model, like hard point optimization.

6. Summary and Conclusion

This paper presents the basic structure, working principle and process of double-front-axle linkage suspension of a Truck. Due to the motion relationship among the parts of double-front-axle linkage suspension system is very complicated and theoretical computing also can't work well, a full truck with the linkage suspension has been established in ADAMS. The simulation method presented in this paper has been proved through comparing the simulation curves with the experimental results in the simulation of the full truck passing a twist road. The simplified model is reasonable and feasible, the simulation has high precision, and the method is effective for both design and optimization of double-front-axle linkage suspension.

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Limited Proteolysis: Evaluating the Degree of Hydrolysis of Protein Hydrolysates from *Vigna subterranea* and *Cajanus cajan*

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Abstract: The protein hydrolysates of two neglected and underutilized legumes; *Vigna subterranea* (Bambara groundnut) and *Cajanus cajan* (Pigeon pea) were subjected to limited proteolysis. The limited enzymatic hydrolyses were carried out with alcalase, pepsin and papain while the Ninhydrin protocol was used to follow the degree of hydrolysis. Bambara groundnut proteins were only marginally vulnerable to hydrolysis just as Pigeon pea proteins were. However, pepsin had the least degree of hydrolysis whereas alcalase which generally has a larger molecular weight had the highest degree of hydrolysis for Pigeon pea protein. Papain's performance in degree of hydrolysis may be due to the low cysteine amino acids in Pigeon pea. On the other hand, alcalase had the least degree of hydrolysis whereas papain had the highest degree of hydrolysis for Bambara groundnut protein. The image J analysis confirmed the actions of these enzymes. It also confirmed the presence of numerous polypeptides of relatively low molecular weights especially at the 120th min. It is believed that the technique of limited proteolysis would be mastered for NULs such as Bambara groundnut and Pigeon pea proteins, and subsequently; their surface functional properties and thus, the food industrial applications of their resultant polypeptides would fully be realized.

Key words: Cysteine, hydrolysis, ninhydrin, pepsin, polypeptides

Introduction

The need for new food sources has become essential to combat the global food insecurity. All over the world and most especially in developing countries there is a lot of pressure on a number of food sources to fight hunger and malnutrition. The cost of these few food sources and their inadequacy in supplies make people who cannot afford the purchase tend to be malnourished.

Enzymatic hydrolysis of proteins releases small peptides and free amino acids, and may contribute to increase the nutritional value of food proteins. One method to improve the food utilization of underutilized legumes is therefore through limited proteolysis and this process has been reported to contribute to the nutritional, functional, immunological and biological activity of the protein hydrolysate obtained (Cheison *et al.*, 2009).

It has been reported that the two cereals; maize and wheat satisfies little of the protein and calorie requirement (IPGRI, 2000). In comparison, legume stands to provide quality protein than cereals (Ekanayake *et al.*, 2000). In trying to solve the imbalances in food security, one of the major tools is the use of legume protein products with special functional properties. Legumes with high quality protein and calories that are not extensively utilized as food have become a primary target in this effort.

Thus legumes with high nutritional quality which are easy for people with a low income to purchase; foods that are less costly to produce need to be cultivated in the tropics where a large portion of

the persons who are affected by food shortages reside (Ekanayake *et al.*, 2000).

The advancement of science and technology has transformed soya beans into diverse products and enhanced its commercialization and marketing systems leading to the neglect and underutilization of the so called NULs (neglected and underutilized legumes). The problem with plant protein is its insolubility in water. While some scientists have sought to increase the application of plant proteins through chemical modification to increase its hydrophilicity, in order to increase their solubility, others frown on chemical modification protocols due to consumer negative perceptions about artificial chemicals in foods. Hydrolysis of proteins depolymerizes the parent proteins and the resulting polypeptides are more soluble in water. However, the advancement of limited proteolysis has not fully been exploited to increase the processing difficulties of NULs proteins which are already believed to be hardy since more favorable soy bean is available for industrial applications. Limited proteolysis could be used to control the breakdown of the parent protein to such limits that could permit the solubility of the resulting polypeptide so it could evoke the surface functional properties that is desperately desired for food functionalities.

Generally, limited proteolysis of protein preparations offers a possibility to obtain hydrolysates with enhanced functional properties. As a result of this process, molecular weight is reduced, the number of functional groups capable of ionisation is increased and a change in surface hydrophobicity occurs (Lahl and Braun,

1994), which leads to the change in the functional properties of the system. This depends, however, not only on the enzyme used and conditions of proteolysis, but also on the kind of raw material and the method by which it was obtained.

The degree of hydrolysis according to Cheison *et al.* (2000) is an important parameter to understand and interpret the effect and extent of the hydrolytic process of the proteins and it is useful to establish the relationships between proteolysis and the improvement of the functional, bioactive and sensory properties of these biomolecules. In the current study three enzymes (cysteine, aspartic and serine enzyme groups) would be used to hydrolyse two different legume proteins. The choice of enzymes was influenced by their sources and the influence they have on the protein type.

From the outlines above, it can clearly be seen that limited proteolysis is a promising approach to improve functional properties of legume proteins. The method could be a better way of modifying food proteins to allay any fears or answer regulatory questions that must be raised as a matter of concern when chemical modification of proteins are carried out.

The main goal of the work is to upscale the utility of NULs proteins and thus, the livelihood of the poor forest dwellers who make a living on its cultivation. With an aim to establish the relationship between hydrolysis time and the degree of hydrolyses of Bambara groundnut and Pigeon pea proteins in alcalase, pepsin and papain systems respectively.

Materials and Methods

Materials

Pigeon pea was obtained from an out grower in *Drobo* in the Brong *Ahafo* region Ghana, while the Bambara groundnut was purchased from the *Ayigya* Market in Kumasi. Three enzymes; pepsin (aspartic protease obtained from porcine stomach), *alcalase* (bacterial serine protease from *Bacillus licheniformis*) and *papain* (cysteine protease obtained papaya fruit latex) were obtained from Sigma –Aldrich, USA.

Milling and defatting of dried Bambara groundnuts and Pigeon pea

The dried beans were sorted and milled into fine powder and defatted using hexane in a ratio of seed meal-to-solvent, 1:10 w/v, in a cold extraction. The defatted flour was spread on trays and solar-dried for about two to three hours in a solar tent dryer, to expel the volatile extraction solvent and stored in plastic bags for further analysis.

Protein Extraction and Characterization of Isolates

The protein was extracted by using the Gomez –Brenes *et al.* (1983) method where protein extraction from the dried defatted Bambara groundnut flour was done by using 0.01M NaOH. The meal to solvent ratio of 1:10 w/v was stirred in a large plastic container at room temperature for two hours. This mixture was

allowed to stand for further 2 h. Proteins and soluble polysaccharides such as oligosaccharides were dissolved while the insoluble polysaccharides and residues settled at the bottom.

The supernatant was decanted and centrifuged (Towson and Mercer G24 Centrifuge, Shimadzu, Tokyo-Japan) at 2500 rpm for 30 min in order to separate any the insoluble residues. The supernatant was later acidified to a pH range of 4.5-5.0 with 0.1 M HCl to precipitate the proteins. The supernatant still containing the soluble polysaccharides was decanted and discarded. The protein suspension which was obtained after precipitation was further subjected to centrifugation at 2500 rpm for 30 min to separate the proteins. The precipitated proteins were thrice washed with distilled water and freeze dried in a freeze dryer (HETO POWER DRY LL300, Thermo Fisher Scientific, Waltham, MA).

The freeze-dried proteins were later characterized by determining their protein concentrations. Aliquots of the protein isolates were taken from the supernatant solutions (from the runs) for protein estimation by means of standard curve according to the method of Bradford (1976). The Coomassie protein assay reagent was used with stock solution of bovine serum albumin (BSA) of concentration 0.5 mg/mL were prepared with phosphate buffer of pH 5.8 being used for the standard. The absorbance was measured at 595 nm using spectrophotometer (UV/VIS 1601, Shimadzu, Tokyo-Japan). The absorbance generated for the runs were converted to amount of protein extracted as using the equation generated from the standard curve.

Methods

Limited Proteolysis Experimental Design

Two factors; *time of hydrolysis* (10 -120 min), numeric factor and *type of enzymes* (alcalase, pepsin and papain) the choice of enzymes for the hydrolysis was influenced by the type of peptide bonds they hydrolyse. Categorical factors were used to treat Bambara groundnut and Pigeon pea proteins. These factors were studied in a response surface methodology, D-optimal design where 17 experimental runs were projected in a quadratic initial design to study the response; degree of hydrolysis of the limited proteolysis of the two separate proteins. This design was chosen because it is recommended as a choice when there are categorical and numeric factors in a single treatment design or when there are constraints in the design or when there is the need to fit a cubic or higher order model (Myers *et al.*, 2004).

Limited Proteolysis Process

The partial hydrolyses of the two protein isolates were monitored using the Ninhydrin technique (Adler-Nissen, 1986). In this protocol, amino acids react with Ninhydrin hydrate at pH 5 and at 100 °C for a standard period of time to give a purple-blue, ammonium salt of diketohydrindylidene-diketohydrindamine as the major product. The absorbance of the purple-blue product is

measured at 570 nm. The purities of the Bambara groundnut protein (BGPI) and Pigeon pea protein isolate (PPPI) were determined. They were reconstituted to 8 % (w/v) in deionized water, homogenized, adjusted to optimum pH of each enzyme (table 3.1), and agitated at 50 °C for 15 min before enzyme was added. The dispersions were treated with the proteases under optimum conditions of each enzyme. The optimum incubation was pH 9.0 at 60 °C for alcalase and that for papain was at a pH 7.0 at 50 °C, while pepsin was run at a pH of 3.0 and at a temperature of 37 °C. The hydrolytic reactions were terminated by inactivating pepsin by neutralization with 0.2N NaOH at 50 °C for 5 min while alcalase was inactivated by lowering pH to 5.0 at 70 °C for 15 min with 0.2N HCl. Papain was inactivated at 85 °C for 10 min. The resulting hydrolysates were readjusted to pH 7.0.

Determination of the Degree of Hydrolysis

A series of calibration standard solutions between 0.01 and 0.15 amino acid meq/g was prepared by diluting 1.5 mM leucine standard solution with same solvent that was used to prepare the sample protein solution and 0.2 ml of Ninhydrin reagent added. Another 0.2 ml of the Ninhydrin reagent was then added to 1 ml of the hydrolysate, 1 ml of a blank solution and 1 ml of the unhydrolysed proteins. These were all analyzed at 570 nm using spectrophotometer (UV/VIS 1601, Shimadzu, Tokyo-Japan). A calibration curve was obtained for leucine by plotting A₅₇₀ versus equivalent amino acid standard concentration. For each time point, the concentration equivalents of amino groups in the samples were determined by extrapolating from each standard curve. For each time point, the amount of released amino groups (h) was determined by subtracting the value of the corresponding unhydrolysed control in the corresponding standard curve after the blank has already been accounted for. This gave the number of equivalents of peptide bonds hydrolyzed (h), expressed as meq/g protein from the following equations according to Adler-Nissen (1986):

$$h = (A \times b) / m$$

Where A is the absorbance at 570; b and m are the y intercept and slope of the calibration curve respectively.

The degree of hydrolysis at each time point was then calculated from the following equation:

$$DH = h / h_{tot} \times 100 \%$$

where h_{tot} is the total amount of peptide bonds given as 8 (obtained as the reconstituted 8 % (w/v) in deionized of the sample protein prepared in the sample characterization stage).

SDS-PAGE Analysis

The molecular weights of the hydrolysates from the 10th minute of hydrolysis and the 120th minute of hydrolysis (Table 3.2) for all the three enzymes were determined using polyacrylamide gel electrophoresis (PAGE) in sodium dodecyl sulphate (SDS). A Tris-HCl buffer (pH 6.8) containing 2 % SDS, 10 % glycerol and 0.002 % bromophenol blue was used as the sample buffer. The

samples were all loaded into the 10 well precast gel (Bio-Rad Laboratories, Richmond, CA) according to the procedure described by Laemmli (1970) and placed into a Mini-Protean II dual slab cell (Bio-Rad Laboratories, Richmond, CA). Electrophoresis was carried out at a voltage between 80 and 120 V. The separated bands of proteins were stained with Coomassie brilliant blue R 250. Molecular weights were determined by measuring the distances of migration in comparison with the standards.

Image J analysis of electrophoregram

The electrophoregram from the SDS-PAGE was scanned using HP Scan jet 2,400 at 1,200 dpi (Hewlett-Packard, Glasgow, Scotland, U.K.) and analyzed using the image J software according to the gel analyzer option as described by Ferreira and Rasband (2010). In this analysis, the scanned electrophoregram was opened in image J and the 'analyze>gels>gel analyzer options' were clicked in series and the boxes 'label with percentages, outline lanes and invert peaks' checked. The rectangular tool was then chosen, positioned around the stained bands in the first lane and the 'analyze>gels>select first lane' commands were chosen. Using the arrow keys, the rectangle was moved over the next lane after which the 'analyze>gels>select next lane' selected and measurement of bands done as before. The rest of the bands in the lanes were similarly measured and the profile of each lane were plotted using the 'analyze>gels>plot lanes' commands. The straight line tool was selected with which straight lines were drawn at the base of each peak which enclosed the area of the peak. With the wand command, the inside of the individual peaks were clicked after which the 'analyze>gels>label peaks' were clicked to express each peak size as a percentage of the total size of all the measured peaks in one column. From the results window, the 'edit>copy all' buttons were clicked which copied the results into a spreadsheet. Subsequently the percentage peaks against the logarithm of the molecular weights of the proteins (having calculated them previously from their R_f's) were run in a statistical tool, (GraphPad Prism, 2007) to obtain the graphs.

Results and Discussion

Effect of time on the degree of hydrolysis for the three enzymes on Bambara groundnut

From figure 1 above there was a gradual increase in degree of hydrolysis for all three enzymes with papain having the highest degree of hydrolysis at start time of 10 min. In the initial period of hydrolysis, a large number of peptide bonds are cleaved, thus showing an increase in degree of hydrolysis. This was similarly reported by Silvestre *et al.* (1994) when whey protein concentrate were hydrolyzed with pancreatin. Vioque *et al.* (2000) also reported similar trend when rapeseed protein isolate was hydrolyzed with alcalase. Differences in enzyme specificity may have led to differences between the protein hydrolyses curves and the degree of hydrolysis.

Around 80 min hydrolysis time, the degree of hydrolysis was quite similar for all the three enzymes. All the DHs of the enzymes for the Bambara groundnut proteins went through a steady increase after which the DHs rose sharply towards the end of their hydrolyses

with alcalase, a serine protease which is a nonspecific endoprotease (Vioque *et al.*,2000) and hydrolyzes serine peptide groups had the highest DH value.

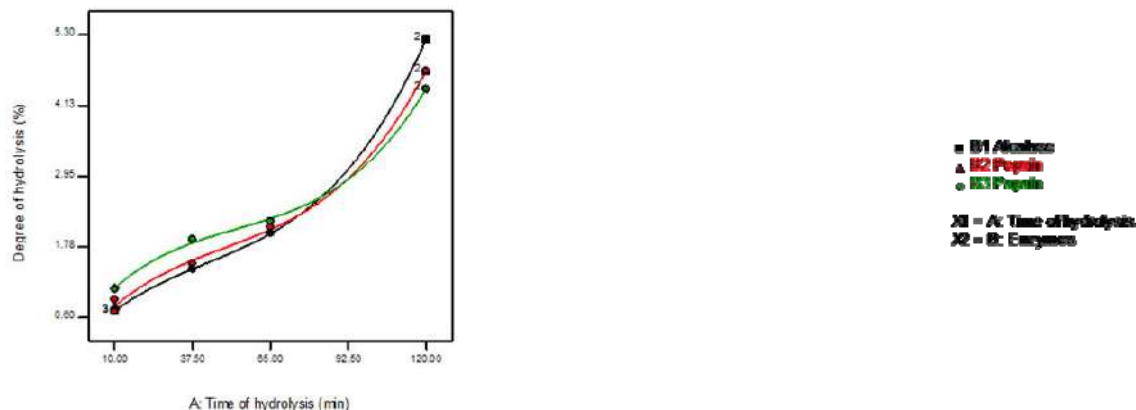


Figure1. Regression plot showing the time of hydrolysis and the degree of hydrolysis of Bambara groundnut protein hydrolysate as a result of proteolysis (■ Alcalase, ▲ pepsin and ◆ papain)

Vioque *et al.* (2000) reported that alcalase hydrolysates with DH of 7.7 % gave bitter peptides and this has also been reported by Chobert *et al.* (1988) that long hydrolysis time had an effect on the taste of the final hydrolysates which are usually bitter after taste. According to Panyam *et al.* (1996), protein hydrolysates with low DH after limited proteolysis had better functional properties than the original proteins and that enhanced functional properties such as water and oil absorption, foaming capacity or emulsifying activity are important food ingredients indicators.

Again, the rate of hydrolysis and final DH were also dependent upon the initial level of protein denaturation. The differences in reaction conditions of each enzyme such as hydrolyzing temperature and pH could have affected the extent of protein unfolding, thus resulting in varying degrees of protein hydrolysis (Chobert *et al.*, 1988).

Effect of limited proteolysis on the protein profile of Bambara groundnut

SDS-PAGE of the hydrolysates from Bambara groundnut proteins for each enzyme gave multiple bands these band were represented in the graph below

Enzymatic protein hydrolysates containing short chain peptides with defined amino acid composition and molecular size are preferred for specific formulations (Chobert *et al.*, 1988).

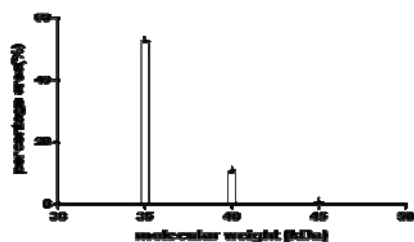


Figure 2. Percentage band area of the molecular weights of papain hydrolysis of Bambara groundnut protein hydrolysate at a DH of 1.9 %

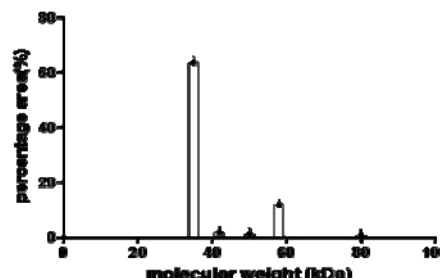


Figure 3. Percentage band area of the molecular weights of papain hydrolysis of Bambara groundnut protein hydrolysate at a DH of 4.4 %

Thus protein hydrolysates offer an alternative to intact proteins and elemental formula in the development of special formulations designed to provide nutritional support. Upon limited proteolysis, proteins were separated into large numbers of fractions resulting in increasing bands as reported by Barac *et al.* (2011).

At degree of hydrolysis of 1.9 % from figure 3, three (2) peptides have been hydrolysed with the prominent peak being that of the least molecular eight of 35kDa the highest molecular wight at this time , thus, 10 min was 45 kDa.

A degree of hydrolysis of 4.4 % from figure 3, was however, achieved in the 120th min, five bands appeared, indicating five peptide groups hydrolysed. The prominent peak was 35 kDa and this showed an increase compared to three peaks at the 10th min .

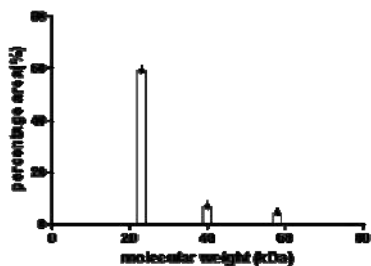


Figure 4. Percentage band area of the molecular weights of pepsin hydrolysis of bambara groundnut protein hydrolysate at degree of hydrolysis 1.2 %

From figure 4., a degree of hydrolysis 1.2 % was achieved in the 10th min of hydrolysis time, three (3) bands appeared giving significant peaks ranging from 23 kDa to 58 kDa. The prominent peak was observed at 23 kDa.

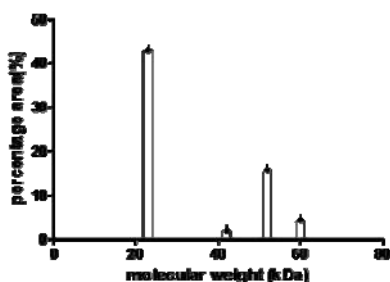


Figure 5. Percentage band area of the molecular weights of hydrolysis of bambara groundnut protein hydrolysate for pepsin at a DH of 4.7 %

At degree of hydrolysis 4.7 % from figure 5, four (4) bands appeared giving peaks ranging from 23 kDa to 60 kDa. The prominent peaks were observed at 23 kDa and 52 kDa respectively. There was an increase in the number of peaks as compared to the situation at DH of 1.2 % . Both had their highest peak at 23 kDa even though there was an introduction of new band peak at a DH of 4.7 %.

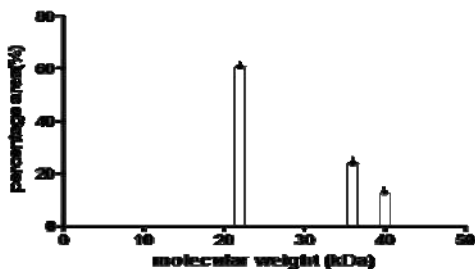


Figure 6. Percentage band area of the molecular weights of alcalase hydrolysis of Bambara groundnut protein hydrolysate at a DH of 0.7 %

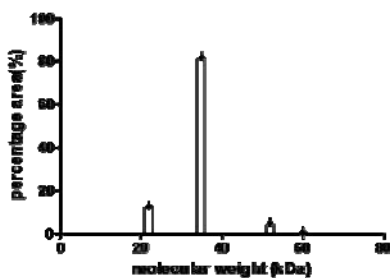


Figure 7. Percentage band area of the molecular weights of alcalase hydrolysis of bambara groundnut protein hydrolysate at a DH of 5.2 %

At degree of hydrolysis 5.2 from figure 7, which was achieved in the 120th min, four bands appeared giving significant peaks ranging from 22 kDa to 52 kDa. Prominent peaks were observed at 22 kDa and 36 kDa . There was an increase in the number of peaks as degree of hydrolysis increased for this hydrolysate when compare to that of figure 6 where the degree of hydrolysis was 0.7 and three peaks appeared.

Data analysis of Pegoion pea protein hydrolysis

Similarly, after the DH responses were loaded and run for treatment of the Pigeon pea proteins, the sequential model sum of squares table was obtained.

Effect of time on the degree of hydrolysis for the three enzymes on Bambara groundnut

The addition of enzyme is a decisive factor affecting the hydrolysis rate and its magnitude depends, among others, on the kind of hydrolysed protein (Surówka *et al.*, 2003). However, from the figure above there was a gradual increase in degree of hydrolysis for all three enzymes with alcalase having the highest degree of hydrolysis at start time of 10 min.

From figure 8 on the 10th minute, alcalase had the highest degree of hydrolysis with papain and pepsin starting at similar degree of hydrolysis and ending being the least in degree of hydrolysis. Papain’s low performance on Pigeon pea may be because Pigeon pea proteins are low in cysteine amino acid according to Eltayab *et al.* (2008). The results obtained in figure 8 are comparable to that obtained by Govindaraju and Srinivas (2006) who obtained hydrolysates with low DH 3-5 %, resulting from treatment by papain, alcalase and fungal protease.

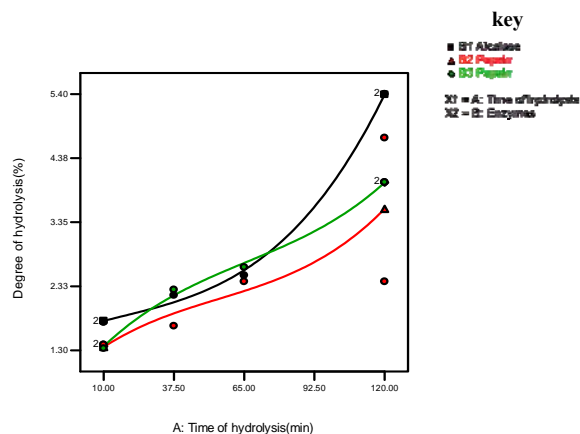


Figure 8. Regressional plots showing the time of hydrolysis and the degree of hydrolysis of Bambara groundnut protein hydrolysates as a result of proteolysis (■ Alcalase, ▲ Pepsin and ◆ Papain)

Their results indicated that emulsifying property of hydrolysates was improved with low DH, but extensive hydrolysis

resulted in remarkable reduction in emulsification meaning the possibility exist that further determination of the hydrolysates could have recommended surface functional properties. From the figure 8 at the end of the hydrolysis, alcalase hydrolysates maintained being the highest in terms of the degree of hydrolysis score. These suggest that for Pigeon pea, alcalase performance is remarkable and must be monitored closely in order to prevent excessive hydrolysis that would not yield resourceful surface functional properties.

Effect of limited proteolysis on the protein profile of Pigeon pea

In general, figures below show that there has been reduction in the molecular weights of proteins following limited proteolysis with increasing degree of hydrolysis. The degree of hydrolysis increased positively with peaks. In limited hydrolysis, the enzymes are said to breakdown proteins of larger molecular weights to smaller molecular weights.

The length of peptide chain influences the rate of absorption, and therefore, the nutritional value of food proteins (Silvestre, 2013). The increased number of bands can be attributed to the polymerization of proteins of larger molecular weights. It was also observed from the two electrophotogram that as the degree of hydrolysis increases the thickness of the bands reduces.

Enzymatic hydrolysis separated total Pigeon pea proteins into multiple components with molecular weight (MW) ranging from 97 kDa to 23 kDa. Barac *et al.* (2011) reported that upon hydrolysis, pea protein hydrolysate ranges from 104.8 kDa to 9.8 kDa which originated mainly from vicilin and legumin.

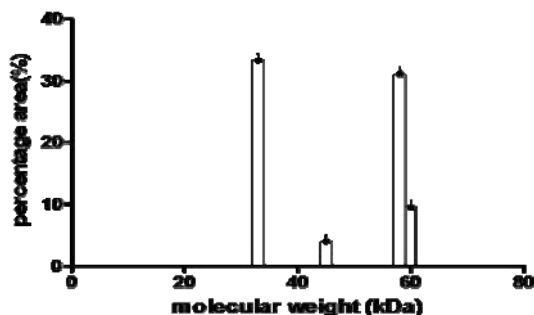


Figure 9. Percentage of band area for papain hydrolysis of pigeon pea protein hydrolysate at degree of hydrolysis 1.6 %

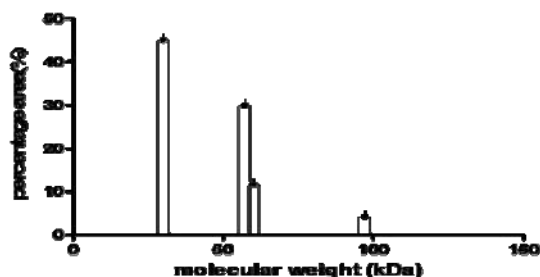


Figure 10. Percentage band area of the molecular weights of hydrolysis papain hydrolysis of pigeon pea protein hydrolysate at degree of hydrolysis 4.0 %

Figure 9 shows the hydrolysis at degree of hydrolysis 1.6 % which was achieved in the 10th minute, four (4) bands appeared giving significant peaks ranging from 33 kDa to 60 kDa. At degree of hydrolysis 4.0 % in figure 10, which was achieved in the 120th min, four bands appeared again giving significant peaks ranging from 30 kDa to 97 kDa. A protein with an apparent MW of about 97 kDa, which was present at the 120th min, has been reported to be lipoxigenase (Crévieu *et al.*, 1997).

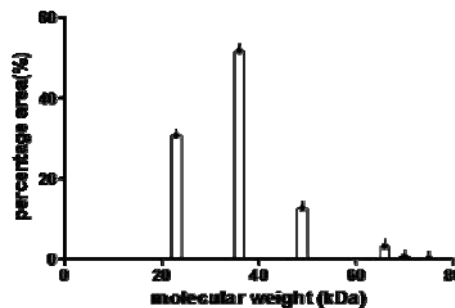


Figure 11. Percentage band area of the molecular weights of hydrolysis alcalase hydrolysis of pigeon pea protein hydrolysate at degree of hydrolysis 2.2 %

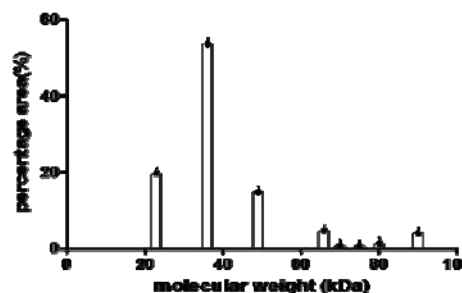


Figure 12. Percentage of peak area for alcalase hydrolysis of pigeon pea protein hydrolysate at degree of hydrolysis 5.4 %

A degree of hydrolysis 2.2 % from figure 10 was achieved in the 10th minute, six bands appeared giving significant peaks ranging from 22 kDa to 97 kDa. At degree of hydrolysis 5.4% from figure 11 which was achieved in the 120th min, eight bands appeared giving significant peaks ranging from 23 kDa to 90 kDa. Prominent peaks were observed at 36 kDa the highest and 23 kDa. This showed high increase in bands and may be because Alcalase had high degree of hydrolysis in limited proteolysis of Pigeon pea compared papain and pepsin.

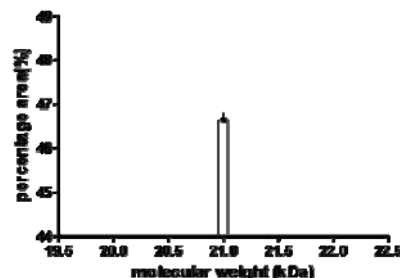


Figure 13. Percentage band area of the molecular weights of hydrolysis pepsin hydrolysis of pigeon pea protein hydrolysate at degree of hydrolysis 2.2 %

At degree of hydrolysis 2.2 % which was achieved in the 10th min from figure 12, one band which appeared on 21 kDa. there were no bands at the 120 min hydrolysis. Generally, pepsin's hydrolysate was the least in terms of degree of hydrolysis of Pigeon pea. No band at all was observed from electrophoregram and may be because produced peptides can interact with unhydrolysed protein via hydrophobic interactions resulting in increase of the insoluble protein fraction as reported by Paraman *et al.* (2006).

The functional properties of the legumes after this hydrolysis are generally going to be altered. Govindaraju and Srinivas (2006) obtained hydrolysates with low DH 3-5 %, which were treated by papain, alcalase and fungal protease. Their results indicated that emulsifying property of hydrolysates was improved with low DH, but extensive hydrolysis resulted in remarkable reduction in emulsification.

From this study alcalase are expected to have high impact on the functional properties of Bambara groundnut and Pigeon pea proteins from Bambara groundnut and Pigeon pea respectively. This is therefore indicative that new food product can be produced from Bambara groundnut and pigeon pea proteins following limited proteolysis.

The use of alcalase, pepsin and papain from 10 min to 120 min on both Bambara groundnut and Pigeon pea protein isolates was able to produce hydrolyzed proteins with increased peptide size distribution under increasing degree of hydrolysis. SDS-PAGE analysis confirmed that degree of hydrolysis has an influence on the peptide profile of hydrolysates following hydrolysis. Again on the average, alcalase showed the highest degree of hydrolysis in Pigeon pea protein hydrolysate. Papain on the otherhand showed the highest degree of hydrolysis and SDS-PAGE analysis confirmed it produced smaller peptides in its action on Bambara groundnut proteins.

Recommendations

Further works should be done to relate the degree of hydrolysis and peptide profile on the functional properties of the resultant hydrolysate so as to help in the production of new and improved food products from the two underutilized protein sources.

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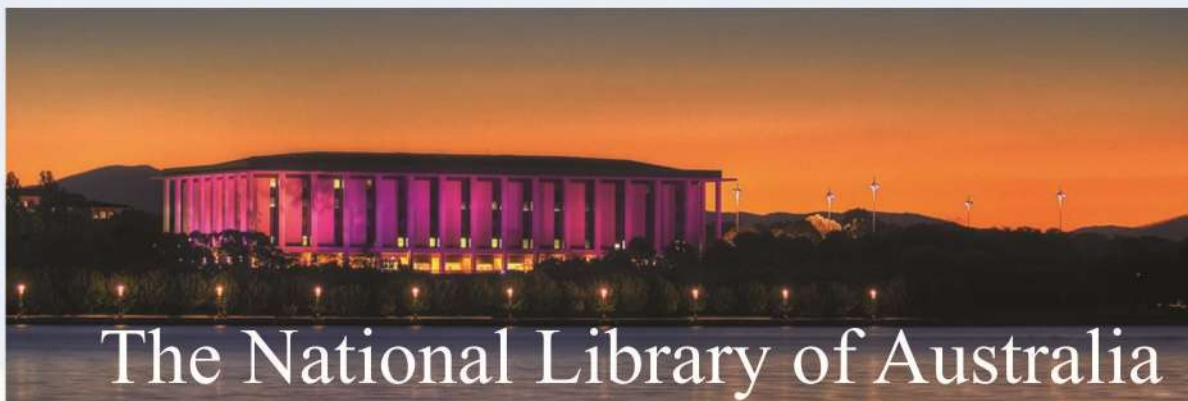
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