8th Crossroads in Cultural Studies Conference
17-21 June 2010, Lingnan University, Hong Kong

Sustainable Peace and Knowledge Production: the case of Shanxi Peacewomen

(Panel: "Ecology and Peace; the case of sustainable livelihood and gender in Mainland China")

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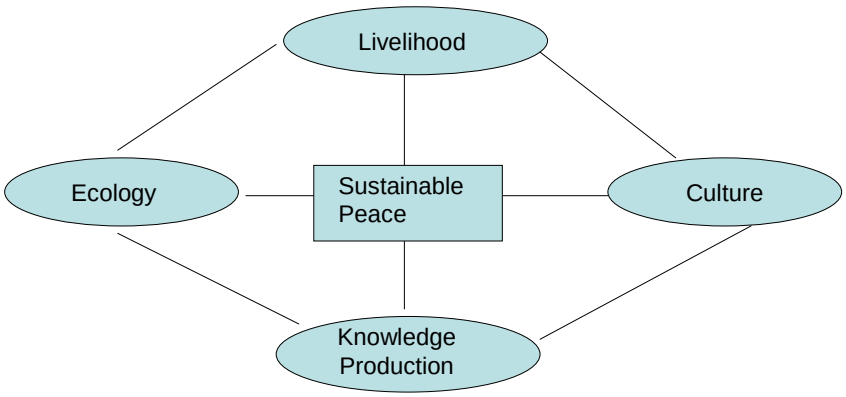
Introduction to the Panel:

The three papers included in this panel are the interim output of the collaborative research project "Women's Sustainable Development and Educational Work for Peace---A Study of the Nobel Peace Prize Nominees from Hong Kong, Mainland China, and Taiwan". The background of this project is the "1000 Women for the Nobel Peace Prize 2005" project which tried to re-conceptualize peace beyond war, to contextualize it in the everyday life politics, and to emphasize the contribution of grassroot women all over the world. The panelists here were also involved in the nomination work within Mainland China, Hong Kong and Taiwan, under the sponsorship of KFCRD, Lingnan University. (Activities have been organized around this project in the Art Gallery of Lingnan University during the conference period.)

The research project on "Women's Sustainable Development and Educational Work for Peace", initiated in 2008, aimed to:
1) to consolidate the re-conceptualization of peace in terms of sustainable livelihood, ecology development, social justice, and community culture by means of the experiences of Chinese PeaceWomen;
2) to find out the conditions for sustaining the peace-work of Chinese women through investigating the process of knowledge production and circulation and its gender specificity; and
3) to develop a new mode of peace that organically integrate livelihood, ecology, culture, and education (knowledge production and circulation), as show in the diagram:



Specific to the articulation of peace in sustainability terms, the examination of the conditions of peace work would mean to investigate:

1) the structural and non-structural violence that damages the environment, livelihood, and relationships;
2) the concepts and strategies used by the PeaceWomen to enhance a balance between ecology, livelihood and culture, and thus producing new knowledge on such areas for themselves and to other members of the community; and
3) the changes experienced and the difficulties encountered during the process.

We adopted the method of Participatory Action Research to conduct this research, meaning we participated in the implementation of the peace action plans of the PeaceWomen under study both as researcher and facilitator in the past two years. In-depth interviews were also conducted within the process.

The following three presentations will be based on the on-going peace action of three of eleven PeaceWomen participating in this research and coming from Yunan, Jiangxi and Shanxi Province of Mainland China respectively.

Background: PeaceWomen and Peace Action in Lijiazhuang Village, Fenyang City, Shanxi Province

Lijiazhuang Village is now a fruit growing village very close to the Fenyang City, a County-level city 3 hour-bus drive from Taiyuan, the Provincial city of Shanxi which is located in the North-western part of China. Before 1995, the Village mainly produced wheat, soya beans, corn and sorghum for subsistence. Due to scarcity of water resources, the Village turned into a fruit growing area for cash income. Pears and apples are the three major cash crops grown in the contract land (zeren tian, 责任田) owned by the collective (i.e. the village government), while walnuts, grapes, dates etc are the minor crops. Most villagers have been using chemical fertilizers and pesticides in growing fruits, particularly pears and apples.

Ms Wang Shuxia and Ms Duan Suolan, the two peasant women who participate in this peace action research are the leaders of two community organizations in the Village, namely the Women's Association (WA) and the Mutual Aid Cooperative (MAC). Wang, officially nominated as one of the 108 Chinese PeaceWomen (PW) in the 1000wnpp project, was the one who pioneered in ecological and cultural practices in the village after taking some training courses organized by the national Women's Federation sponsored magazine *Nongjianv*(*Peasant Women*, 农家女) and the NGO Yanyangchu School of Rural Construction back in 2004. Not only did she build the very first bio-gas pit (zhaochi, 沼池) in the village to demonstrate the effectiveness of the ecological model of "pigs—bio resources—fruit trees"（zhu-zhao-guo, 猪-沼-果） and later led the other 100 or so villagers to install such kind of pit under the government's subsidy scheme, she also set up the WA and MAC to organize women's cultural activities (such as setting up a reading room and a dancing group), agricultural technology training sessions, small food-processing projects (such as walnuts, grapes), small scale credit, and so on. Putting what she had learnt in training courses outside the village into action plans to improve the environment, livelihood and cultural life in the village was the reason why she was being nominated as "PeaceWoman" and selected by us to participate in this research project.

On Wang's behalf, Duan, a younger leader in the village who has been working closely with Wang for a few years, was the one who participated in the first Participatory Action Research Workshop organized by us in Yinchuan City, Ningxia Province, for all the participating PW in our project in August 2008. In this Workshop, after many fruitful exchanges and discussions on their concrete experiences on environmental protection, sustainable livelihood, urban-rural interaction, community

building among the participants, every PW had to come up with a work plan for the peace action to be taken in the coming two years. Afterwards, they would implement the plans in their own sites/organizations. We would meet again in December 2010 to share and reflect on the results and difficulties of the actions plans. This is the action-reflection-action practice mode designed in the project.

The plan that Duan came up with was to stop using pesticide in the Village for a healthier life and community. Back to the village, with our facilitation and resources input, Duan and Wang implemented their action plan by putting up publicity materials on the Village's display boards; running a training workshop in Dec 2008 on healthy agricultural practices including the use of "bio-liquid" (zhaoye, 沼液) as pesticide substitute and nutrition liquid (yingyangye, 营养液) as nurturing supplement, and the preservation of grasses; organizing 10 families who had already stopped using chemical fertilizers to join in an experiment of using bio-liquid to gradually substitute pesticide in 2009. Based on the good response of the participating villagers, satisfactory results and concrete experience in the first stage of the experimentation, they have mobilized 10 more families in Spring this year to join in the second stage of the experiment. A more systematic observation table for bio-liquid and nutrition liquid use, grass management and the activities of worms was designed for the participants to do records. In the coming harvest time in October, it is anticipated that more knowledge about this kind of ecological practices would be generated through this participatory process.

Before analyzing the issues of knowledge production, circulation and reception around such transitional process to organic farming, it is important to contextualize such practices in the environmental/food crisis caused by agriculture pollution and the historical development of the so-called modern agricultural technologies in China after 1949 and its impact on the traditional knowledge system sustained by Chinese peasants for thousand of years.

Context 1: Environmental/food crises caused by agriculture pollution: the production and use of chemical fertilizers and pesticides

As stated by Prof. Wen Tiejun, the renowned Chinese scholar in rural re-construction and ecological agriculture, the agriculture pollution in China is mainly originated from the immense use of chemicals in agriculture. China is on the top of the list of pesticides users in the world. As for producers of pesticides, China ranks second. The 2005-06 figures showed that 56% of the pesticides used were highly poisonous and

450 millions mu(亩, =0.0667 hectares) of agricultural land were sprayed by pesticides. Over 21.87 million sq. qing (顷，=6.6667 hectares) (i.e. 2187 million mu) of land were polluted by chemical fertilizers and pesticides. The amount of pesticides used per annum was over 1.3 million tons. As for chemical fertilizers, the amount used per annum was over 40 million tons, ranking first in the world [1]. As a result, not only more and more arable land become hardened or sandy, and rivers, lakes, and underground water more polluted, vegetables, fruits and other agricultural products sold to consumers as well as peasants themselves are also poisoned. Production and life would not be sustained in the years to come.

Context 2: Historical development of modern agricultural technologies and management in China after 1949 and its form of knowledge transfer

While criticism towards the technological reform in agriculture, i.e. to use high-yield seeds, chemical fertilizers, irrigation systems, pesticides, machines, etc, initiated by the US (the so-called Green Revolution) was being started in the 1950s in the west, due to both material and ideological reasons (for example, resources demand from population growth and industrialization in the city), China collectivized the agricultural labour into production teams and communes from 1950s onwards and introduced scientific technologies to modernize agricultural practices, including the use of chemical fertilizers and pesticides. At that time, the supply of these materials was regulated by the collective shop (供销社) and distributed to the production teams. At the same time, agricultural technicians (as experts) were trained to teach production team members, i.e. individual peasant, to use such technologies and to follow instructions. The whole supportive system of water irrigation and electricity supply were also built to run such kind of production model. Agricultural production at that period did not only involve technological transfer, but also a politicization process. Meaning, it was a political responsibility for the production teams and communes in the villages to fulfill the production target set by the government in order to show their sincerity to socialist ideology. Therefore as a collective, peasants in the production team would follow the instructions of the technician to use chemical fertilizers and pesticides to guarantee high yield. At the same time, they did not have to bear the possible economic risk individually as before, since they earned their income by "labour points" (gongfen, 工分) under the socialist system.

Unfortunately, in the late 1970s and early 1980s, when the commune system was dismantled under the Reform Policy of Deng Xiaoping and "family as a unit" production system was restored, peasants' reliance on technologies, especially on the

use of chemical fertilizers and pesticides, had already rooted in the peasants' practices. With chemical fertilizers and pesticides became more and more assessable in the new market economy, and individual family's economic survival or livelihood heavily relied on the small pieces of land allocated by the Government, the use of chemical fertilizers and pesticides were even more intense than before. The mentality and habit of relying on the instructions of the technician without knowing the hazard of using such chemicals still prevailed.

As summarized by a Chinese researcher, the agricultural knowledge system in China had been re-written by the modern technologies in three ways:

1) Modern agricultural production skills come from laboratories of agricultural scientists, but not the experiences accumulated by generations and generations of peasants; in other words, it is no longer generated from inside, but rely on external input;
2) Since these technologies are labeled as scientific and thus universal, the experiences and values of individual farmer have been degraded. As a result, the position of peasants is always lower than technologies or technician/experts, and traditional knowledge and skills on farming are considered "backward" and technologies "advanced".
3) Agriculture has become "agribusiness" in 30 years' time and many peasants see chemical fertilizers and pesticides as a kind of investment to guarantee output from the land rather than a threat to the mode of sustainable livelihood maintained by long-practiced tradition of land nurturing by their ancestors and their health. [2]

As a whole, under such historical process, the general practices of peasants nowadays include buying "improved" seeds (instead of preserving seeds of their own); homogenizing crops growing to meet market needs, using chemical fertilizers to save labour and to guarantee yield , spraying more and more pesticides to kill more and more worms and germs, and even to get rid of the grasses (instead of doing it manually). We can observe these practices in the villages we visited during the research.

As more and more scholars, activists, NGOs, and even the government became aware of the crises, introducing organic farming practices or reviving traditional agricultural knowledge have been gradually included in their working agenda. For example, the Central Government issued documents in 2007 and 2008 to emphasize the importance of using organic fertilizers, green fertilizers and farm fertilizers (nongjiafei, 农家肥), and set policies to support such practices. Subsidizing the Lijiazhuang peasants to

install their bio-gas pits was one of these efforts. However the effect is very minimal under the mainstream ideology and official policy on rapid economic growth.

Under such context, what Wang and Duan have been trying to do in the Village can be understood as an effort to change the attitude and practices of farming by introducing new elements in the de-learning of technologies and re-learning of traditional knowledge processes. As the industrialized approach to agriculture has become a kind "new tradition", it is important to review how PeaceWomen's environmental practices and ways of knowing negotiate with such tradition.

De- learning process: reflecting the experiences of using chemical fertilizers and pesticides through participating organic farming and peace workshops

As mentioned above, environmental concerned NGOs or scholars were the first agents to de-stabilize the "new tradition" of using chemical fertilizers and pesticides among peasants. For example, Wang stopped using chemical fertilizers after she attended the organic farming workshop run by Wen Tiejun in Beijing as early as 1999. Li, Duan's husband, also attended training in organic farming several years ago and stopped using chemical fertilizers by then. After shifting back to the tradition of using farm fertilizers (faeces of chicken, sheep, human etc), they also found that the fruits tasted much better than before. Therefore after they built the bio-gas pit, they made use of the residue and the liquid as fertilizers for the fruit trees. However they still use pesticides to control the spread of worms which are common in fruit farms, especially in pear trees. In implementing the first stage of their action plan, Wang and Duan decided to select those families who have already stopped using chemical fertilizers so as to isolate the factor of pesticides. These families' fields are close to one another.

As a habit inherited from the collective era, many peasants, now as individual producers, actually do not know the brand names, their functions and poisonous degree of the pesticides used. They just listen to the supplier what to buy and follow the instructions of the fruit technician in the village when to do the spraying. Mr Ren, the official technician in the Village, said that he usually broadcasts 5 times a year to remind peasants to spray pesticides. Paradoxically, he pointed out the use of pesticide should not be a fixed operation or a must, but depends on the worm situation each year. However he does not teach peasants to observe such situation so that they can judge by themselves . Furthermore, he pointed out that most peasants lose their ability to do field observation and to control their own operation. As more male peasants take up jobs outside the Village to increase their income, in order to save labour, many

families just hire those who have the machines and skills to spray pesticides to do the job. Li is one of those. In the "Ecological Farming and Healthy Life" training workshop held in the Village in 2008, the deterioration of ecological environment and health conditions of villagers due to the use chemical fertilizers and pesticides was discussed and concepts and methods of nurturing soil, strengthening trees, and restoring ecology to balance worm spread were introduced, including the use of bio-liquid and nutrition liquid. In the workshop, Ms Xu Lanxiang, the Taiwanese renowned organic farmer and environmental movement activist and also a participant of our research, shared her views on "farmers should be an encyclopaedia" if they learn from nature and elderly people and record what they practice. She also criticized the capitalistic and technological approach to agriculture, and advocated the reconstruction of the ecology through the reconstruction of our mind set and values: to have respect for the order of nature and care for our descendants. These views are actually part of the Chinese traditions. Integrated with her own experiences of practicing organic farming, her words were well taken by the participants. It was under such wholistic training approach that the de-learning process was started and the action plan on using bio-liquid as a substitute for pesticides was kicked off.

Re-learning process: self-controlled practices of experimentation, observation and recording

As a kind of modern skills of knowledge delivery, training workshop of this kind may be good enough to gather villagers together, to reveal the hidden crises, and to give out a vision. Worries, concepts and ideas shared and discussed may be a good process of consciousness-raising. However, from knowing to acting, villagers still have many other considerations. What they concern most is whether a change of practice would affect their harvest, and thus their livelihood. Therefore process of action should be step by step, allowing more time for observations and. As in the case Lijiazhuang, since Duan and Wang are peasants themselves who share the worries and concerns of their fellow villagers, the strategy of experimentation is effective in disrupting the old habit of pesticide use to certain extent and making room for observing the new element of bio-liquid added in the production process. In the first stage in 2009, the 10 families participating in the experiment, including Wang and Duan, sprayed bio-liquid 3-4 times in those dates which were considered not so significant to only part of their fruit trees allocated for experimental use. Doing the spraying job for 4 to 5 other families, Li even mixed bio-liquid with pesticide together in order to play safe. Duan and Li did another experiment on preserving grasses in their farm own land as they were more ready to take risks.

When we visited the Village during harvest time and held a meeting with the peasants participating in the experiment, it was the first time for them to sit together to talk about their observations of their trees and fruits and to exchange ideas how to solve one's problem within the experiment period. The result of the experiment was considered satisfactory, demonstrated by the increase in output, better quality and taste of fruits, healthier leaves and trunks to adapt to sudden climate change etc. They decided to launch the second stage of the experimentation in 2010 by further increasing the use of bio-liquid and decreasing the use of pesticides. Excited about the response of her fellow villagers, Duan, the main organizer for this experiment, was confident of peasants' ability to learn through their own observations and learn from one another. She said:

> "I still want to say, if we want to achieve something, we have to act ourselves, to experience ourselves, to operate ourselves. This would generate the result we want. We are not experts. On the one hand, we need to read materials, and on the other, we need to read the earth, to do real field observation: to observe the changes, the processes. This would require our labour input. In winter when you have more time, go to take a walk in the field, take a look, and try to record the changes. What we really want to know would come out from such observations and records.
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> …
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> We can learn from one another, and supplement one another's inadequacy. Another thing, as farmers who have worked in the fields for so many decades, we should have the capacity to observe. Our level of knowledge and abilities are not low. Once we can make use of knowledge and abilities, we can still actualize ourselves. In the past, we only blindly work in the fields, eat, harvest. We do not observe carefully and record what we are doing. We do not discuss questions together. So I think we can create a platform for us to communicate and exchange information on concrete things, such as what problems you are encountering in your field, and in my field. Then we can summarize what we discuss and that would become our knowledge. I think we do not need another training workshop, but just go on with what we are doing."
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> (Interview transcript, 2 Oct 2009)

From what Duan has said, we can observe a clear horizontal and communal way of knowledge production and circulation. This is the traditional way of generating knowledge and skills from inside. This April, Duan organized those who were

interested to join the second stage of experimentation to observe one another's fields to compare the soil texture in relation to grass preservation. This was also the first time they did such form of field observation together. As Duan was very convinced of the importance of grass preservation in improving the ecology after her own experiment on letting grass grow freely around her fruit trees last year, she wanted to include grass preservation into this year's experimentation. With the support of the related reference materials we brought to them and their own past experiences with grass (such as to keep the moisture of soil, to improve the water absorbing capacity etc), the participating villagers were interested to try to stop the habit of clearing all grasses either by digging or using pesticides and see what would happen to the activities of the worms and their fruit trees in the coming months.

This effective way of circulating such information and experience is comparable to a failed training session on the skills of using bio-liquid organized by Mr Zhu, the official technician on the management of bio-gas pit. As a form of support for organic farming, the district government assigned and trained up one villager to become a bio-gas pit technician who should be responsible to train his fellow villagers the skill on the comprehensive use of bio-liquid and residue for farming. However the session he had scheduled for Chinese New Year last year to be taken place in his renovated house/training centre could not attract anybody to come. This form of learning is quite similar to the collective model of learning technologies back in the 1950s. This has a lot to tell about the conditions for farmers to practice new knowledge: not resort to abstraction or skills, but concrete action and results.

Women's way of knowing and knowledge production

By comparing the two modes of practice on advocating the use of bio-liquid as pesticides substitute, we can observe some gender specificity in the process. In the Village, it is usually men to control machines/technologies, including the spraying of pesticides. Therefore all official technicians are men. According to Mr Zhu who is also a participant in the experimentation, many villagers actually do not know the concept and the skills of using the bio-liquid. They should come to the training session. Mr Zhu's observation may be correct. However, as pointed out by Duan, villagers have the capacity to learn the skills by observations and exploration on their own. They just lack motivation to act. This has a lot to do with the mind set and attitude towards nature and livelihood. Therefore what has attracted the attention of the villagers on the use of bio-liquid is not the expert knowledge of Zhu but the experiment organized by the PeaceWomen. However Duan and Wang do not see Zhu

as the competitor but collaborator. To certain extent, they still think that expert knowledge is important, but they realize that they should not rely on them.

Another example to show that women and men may have different ways of knowing is the judgment on villagers' capacity to learn. Mr Ren, the fruit technician, has pointed out that the villagers do not know how to observe the worm situation but just follow instructions passively. But Duan and Wang strongly believe that villagers have the capacity to do field observation, recording, and discussion. This may have a lot to do with positioning. Male experts usually position themselves higher than the villagers (non-experts) and being too confident of their judgment. The skills they possess would not facilitate any changes. Women leaders at the grassroot level like Duan and Wang, however, position themselves as ordinary agricultural practitioner. Through frequent contacts with their fellow villagers, they know better not only their worries and way of thinking, but also their wisdom and abilities. Therefore they are more confident in the participatory process of the experiment and the knowledge generated from their own observations would be more powerful and circulate much faster.

Duan and Wang do not only judge by rationality, but also their own experiences. Through the previous exchange activities with other Chinese PeaceWomen, the realized the importance of on-the-site observation and informal discussion in the process of learning. For example, Duan always mention the 2008 exposure trip in the Inner Mongolian desert where she saw the ways Yin Yuzhen, another PeaceWoman of our project, had overcome the difficulties and changed the ecological environment by tree-planting and personal persistence. This has great impact on her motivation to act and her strategy used. Not only did she learn that change is possible even in difficult situations, but also women's strength gained from love and care for their families, nature and humanities. She observed a lot of changes happened to her in the process of implementing the action plan, including the improvement in her relationship with family members, the community, the environment, and knowing what she should do:

> "Last year, I did not know what is organic farming and its importance to human beings. I only cared for what to eat, to drink and to wear. After learning so much from the exchange activities and about the local situation, I now realize that it is very important and need to do something for my family and people around me. No matter whether it is health for human being or for the trees, we should let our people understand…What we are doing is building a platform for the villagers to express and to communicate, and to help one another, so that they would know

what changes have happened to their land." (Interview transcript, 2 Oct 2009)

Indeed, from just caring for the deteriorating health condition of her husband who has been earning an income by spraying pesticides for other villagers, Duan has learnt to understand the need of the larger community, humanities and nature through implementing the action plan in the Village. As pointed out by Deane Curtin in her article "Women's Knowledge as Expert Knowledge: Indian Women and Ecodevelopment" in her discussion of Indian women's environmental practices and ways of knowing, "while women are not essentially more 'natural', closer to nature, than men and nature is no more female than male, the actual practices typically demanded of women involve mediation between culture and nature."[3] The peace action undertaken by Duan and Wang are indeed a form of mediation between culture and nature. It does not only involved the introduction of organic farming skills and methods to restore ecological balance, but the re-articulation of traditional knowledge around agriculture and the environment, including practices, habits, attitudes, values rewritten by politics and modernization. Also it has deconstructed the binary of nature and culture and its gender imagination. Women can transform and create, like our nature. Women's knowledge are indeed expert knowledge if their practices are taken seriously. As in the case of Lijiazhuang Village, not only technical methods adopted by Duan and Wang such as doing experiments, observation and recording are both "scientific" and "traditional", the knowledge generated are also collaborative, relational and situated which are significant to counteract the top-down knowledge transfer mode practices in the "scientific" world.

Conclusion: peace, sustainable environment, knowledge, and gender

From this case, we see the environmental practices taken up by peasant women in China are important peace action. These practices negotiate with violence at three levels. At the direct level, they would improve the personal health conditions of villagers and the bigger community environment without damaging their livelihood. At the structural level, they are disengaging with the technologies and market oriented economy which has a high environment cost. At the cultural level, they are re-visiting the traditions by making use the modern methods, and re-building the relationship between human and nature, and within the community; and changing the practices and value system among the villagers. Women's way of knowing and acting is the important agent for such negotiation process as they are close to everyday life and nature which has the same nurturing and creative power as women.

[1] 温铁军：“新农村建设中的生态农业与环保农村”，2006

[2] 何宏平：“从抵制到共谋：关于现代农业技术与农民关系的历史考察与个案分析”，页 28-42.

[3] Karen J. Warren ed (1997) Ecofeminism—Women, Culture, Nature, Bloomington and Indianapolis: Indiana University Press, 84