NGEKAR UTATN RAAT KITE:
A LOOK INTO CARTOGRAPHIC ENCOUNTERS IN COUNTER-MAPPING EXERCISES IN WEST KALIMANTAN, INDONESIA

A DISSERTATION SUBMITTED TO THE GRADUATE DIVISION OF THE UNIVERSITY OF HAWAI’I IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY IN GEOGRAPHY

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ABSTRACT

Counter-mapping is both a social movement and method that local communities employ to assert their claims over lands and waters by producing standardized cartographic maps. In this dissertation I attempt to explore the encounters between scientific cartography and indigenous spatial knowledge to reveal the cartographic encounters within counter-mapping using the concepts of spatial literacies and geographic translation. The former is a means to emphasize the existence of diverse spatial knowledges, while the latter is to reveal the centrality of human agency in mapping endeavors. Based on a case study of PPSDAK Pancur Kasih, an indigenous Dayak organization, in carrying out mapping exercises in West Kalimantan (a province in the western part of Indonesian Borneo), I argue for a contestation of concepts, values, and meanings in map making. To do so I look into the discourse and Discourse (Gee 1996) of the activists and their trajectories over the Discourse. I particularly focus on the spatial knowledge of the Maap people (an indigenous Dayak group in the province) and how it relates and is affected by scientific cartography in an counter-mapping exercise the people had.

Trajectories of counter-mapping movement in Indonesia show a mixture of different discourses and its option to use. The movement in in West Kalimantan has the same features but with an additional Discourse of Dayakness that has led to the development of a Discourse of counter-mapping. The conceptual understanding and the practices of counter-mapping among the activists of counter-mapping show this
distinctive Discourse. The spatial knowledge of Maap people is largely based on their movements within the space, which can be considered as performance cartography (Woodward & Lewis 1998). The activists-cum-surveyors themselves know and even grew up with this knowledge. However the option to employ scientific tools gives a very small room for the indigenous knowledge to appear in the final maps. The translation of this indigenous knowledge into standardized cartographic maps shows the incompatibility of both knowledge systems and how it affects the spatial concepts and practices, particularly those related to boundary. This is another form of cartographic encounter, in which indigenous knowledges interact with cartographic knowledge and are translated by the latter’s proponents to produce maps. As a result the Discourse of counter-mapping in West Kalimantan can be considered as a hybrid between indigenous Dayak Discourses and Discourse of dominant modern society.
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<tr>
<td>ADB</td>
<td>Asian Development Bank</td>
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<tr>
<td>AMAN</td>
<td>Aliansi Masyarakat Adat Nusantara, country-wide alliance of indigenous peoples’ organizations in Indonesia</td>
</tr>
<tr>
<td>BAL</td>
<td>Basic Agrarian Law</td>
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<tr>
<td>Bakosurtanal</td>
<td>Badan Koordinasi Survei dan Pemetaan Nasional (Indonesian Surveying and Mapping Agency); latter it is renamed as Badan Informasi Geospasial or Geospatial Information Agency</td>
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<tr>
<td>BIMP-EAGA</td>
<td>Brunei, Indonesia, Malaysia, the Philippines [cooperation in the] East ASEAN Growht Area</td>
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<tr>
<td>BK3D</td>
<td>Badan Koordinasi Koperasi Kredit Daerah, coordinating body of CUs that also functions as insurance body and transfers funds between CUs</td>
</tr>
<tr>
<td>BPD</td>
<td>Badan Perwakilan Desa, law making body with elected members at the desa level</td>
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<td>BSP</td>
<td>Biodiversity Support Program</td>
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<tr>
<td>CMs</td>
<td>Community Mappers</td>
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<tr>
<td>CNBRM</td>
<td>Community-Based Natural Resource Management</td>
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<tr>
<td>CU</td>
<td>credit union</td>
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<tr>
<td>FFI</td>
<td>Flora Fauna International</td>
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<td>FSTI</td>
<td>Federasi Serikat Tani Indonesia (Indonesian Federation of Peasant Unions)</td>
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<tr>
<td>GIS</td>
<td>Geographical Information System</td>
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<tr>
<td>GTZ</td>
<td>Deutsche Gesellschaft für Technische Zusammenarbeit (The German Organisation for Technical Cooperation), now Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)</td>
</tr>
<tr>
<td>HGU</td>
<td>Hak Guna Usaha (Rights to Use Land)</td>
</tr>
<tr>
<td>IDRD</td>
<td>Institute of Dayakologi Research and Development</td>
</tr>
<tr>
<td>ID</td>
<td>Institute Dayakologi</td>
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<tr>
<td>ITC</td>
<td>Inuit Tapirisat Canada</td>
</tr>
<tr>
<td>Acronym</td>
<td>Full Name</td>
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<tr>
<td>JAPHAMA</td>
<td>Jaringan Pembela Hak-hak Masyarakat Adat (Network of the Defenders of Indigenous Peoples' Rights)</td>
</tr>
<tr>
<td>JKPP</td>
<td>Jaringan Kerja Pemetaan Partisipatif (Indonesian Community Mapping Network)</td>
</tr>
<tr>
<td>KAPET</td>
<td>Kawasan Pengembangan Ekonomi Terpadu (Integrated Economic Development Zone)</td>
</tr>
<tr>
<td>KPA</td>
<td>Konsorsium Pembaruan Agraria (Consortium for Agrarian Reform)</td>
</tr>
<tr>
<td>KPMD</td>
<td>Konsorsium Pemberdayaan Masyarakat Dayak (Consortium for the Empowerment of Dayak Peoples)</td>
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<tr>
<td>KpSHK</td>
<td>Konsorsium Pendukung Sistem Hutan Kerakyatan (Consortium of the Supporters of Community-based Forest Management)</td>
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<tr>
<td>LATIN</td>
<td>Lembaga Alam Tropika Indonesia (Indonesian Tropical Institute)</td>
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<tr>
<td>LBBPJ</td>
<td>Lembaga Bela Banua Puti Jaji</td>
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<tr>
<td>LBBT</td>
<td>Lembaga Bela Banua Talino (Institute for the Community Legal Resource Empowerment)</td>
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<tr>
<td>LBH</td>
<td>Lembaga Bantuan Hukum (Legal Aid Institute)</td>
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<tr>
<td>NGO</td>
<td>non-governmental organization</td>
</tr>
<tr>
<td>NRC</td>
<td>National Research Council</td>
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<tr>
<td>PPK</td>
<td>Program Pengembangan Kecamatan, Indonesian name for the World Bank-funded Kecamatan Development Program</td>
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<tr>
<td>PPSDAK</td>
<td>Program Pemberdayaan Sumber Daya Alam Kerakyatan, a unit of Perkumpulan Pancur Kasih specializes in mapping community lands</td>
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<tr>
<td>PKK</td>
<td>Pembinaan Kesejahteraan Keluarga</td>
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<td>PAR</td>
<td>Participatory Action Research</td>
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<tr>
<td>PPSHK</td>
<td>Program Pemberdayaan Sistem Hutan Kerakyatan</td>
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<tr>
<td>PRA</td>
<td>Participatory Rural Appraisal</td>
</tr>
<tr>
<td>Abbreviation</td>
<td>Description</td>
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<tr>
<td>RDTR</td>
<td>Rencana Detil Tata Ruang, detailed spatial plan</td>
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<tr>
<td>REDD</td>
<td>Reducing Emissions from Deforestation and Forest Degradations</td>
</tr>
<tr>
<td>RRA</td>
<td>Rural Rapid Appraisal</td>
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<tr>
<td>RTRW</td>
<td>Rencana Tata Ruang Wilayah, regional spatial plan</td>
</tr>
<tr>
<td>SegeraK</td>
<td>Serikat Gerakan Masyarakat Dayak</td>
</tr>
<tr>
<td>SHK</td>
<td>Sistem Hutan Kerakyatan (civil society version of community-based forest management)</td>
</tr>
<tr>
<td>SPP</td>
<td>simpan pinjam perempuan, PPK-scheme on revolving funds for women</td>
</tr>
<tr>
<td>SPSDAK</td>
<td>Sistem Pengelolaan Sumberdaya Alam Kerakyatan</td>
</tr>
<tr>
<td>STS</td>
<td>Science and Technology Studies</td>
</tr>
<tr>
<td>UNPFII</td>
<td>United Nations of Permanent Forum on Indigenous Issues</td>
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<tr>
<td>YKSPK</td>
<td>Yayasan Karya Sosial Pancur Kasih</td>
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<tr>
<td>YLBHII</td>
<td>Yayasan Lembaga Bantuan Hukum Indonesia</td>
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<tr>
<td>WALHI</td>
<td>Wahana Lingkungan Hidup Indonesia (Indonesian Forum for the Environment)</td>
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<tr>
<td>WWF</td>
<td>Worldwide Fund for Nature (its US organization maintains its original name as World Wildlife Fund)</td>
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</table>
GLOSSARY

The entries have both Indonesian and Maap words. I indicate (Ina) for the former and (Mp) for the latter.

**Adat**: (Ina) customary practices, tradition; often also refers to customary law

**Area Penggunaan Lain**: (Ina) Areas for other purposes; a state forestlands category

**Balai Desa**: (Ina) function hall of the desa

**Barimah**: (Mp) an adat ritual asking for the protection from the Creator.

**Batas**: (Ina) boundary

**Batas**: (Mp) a plot of land

**Bunus**: (Mp) hill ridge

**Camat**: (Ina) an appointed civil servant who heads a kecamatan (sub-district)

**Desa**: (Ina) village, the smallest autonomous territorial unit headed by an elected kepala desa

**Dusun**: (Ina) an administrative unit under desa

**Engkabakng**: (Mp) illipe tree (*Shorea* spp.) and its nuts, widely known as tengkawang

**Gawai**: (Mp) adat ceremony

**Gupukng**: (Mp) forest island

**Gupukng tema’akng**: (Mp) forest garden

**Hutan Lindung**: (Ina) Protected Forest; a state forestlands category

**Kabupaten**: (Ina) an administrative unit under province, headed by an elected Bupati

**Kalomang**: (Mp) go to the river or lower land

**Kampokng badah**: (Mp) a territory of one tribe.

**Kampokng rurokng**: (Mp) main settlement

**Kampokng rurokng tanah aik**: (Mp) settlements along a river

**Kampung**: (Ina) indigenous Dayak village, but generally becomes a dusun

**Kanan**: (Ina & Mp) right (direction)
Kapitalisasi : (Ina) capitalization, a borrowing scheme in credit union with an objective to boost savings

Kar : (Mp) map, an adopted word of kaart (Dutch)

Karat : (Mp) go toward hill or higher land

Kawasan Hutan : (Ina) state forestlands

Kearifan lokal : (Ina) local wisdoms; in this case was limited to religious rituals involving requests for protection from the spirits

Kecamatan : (Ina) administrative unit under kabupaten; sub-district

Kelurahan : (Ina) the smallest administrative unit in the urban areas equal to desa, headed by an appointed civil servant called lurah.

Kepala Adat : (Ina) an officer at desa level that deals with adat matters

Kiba : (Mp) left (direction)

Kilik : (Mp) go downstream

Kobutn gotah : (Mp) rubber garden

Kuluk : (Mp) go upstream

Laakng : (Mp) door, also an apartment in a longhouse

Mongkal : (Mp) hunting

Mungguk : (Mp) low hills

Musyawarah adat : (Ina, Mp) assembly on adat matters

Musyawarah tokoh adat : (Ina) deliberation among adat leaders

Ngèkar : (Mp) the act of mapmaking

Ntaré : (Mp) boundary

Ntírung : (Mp) temporary hut built during hunting trips

Omah botakng panjang : (Mp) longhouse

Orang darat : (Ina) Uplanders, a derogatory word, similar meaning exists in orang hulu, orang kampung, and orang kampung.

Padi nyemaru : (Mp) a rice harvest ceremony by eating the first harvested rice

Paduserasi : (Ina) realignment of boundaries of state forestlands and functions in spatial planning maps
| **Pagontikng** | (Mp) narrow valley between two hills |
| **Pancasila**  | (Ina) Indonesian state ideology consists of five principles: monotheism, just and civilized humanity, national unity, democracy, and social justice. |
| **Pancur Kasih** | (Ina) the name of an organization in West Kalimantan |
| **Pangeran**   | (Ina) local ruler in Kalimantan during the colonial era. |
| **Pejalatn**   | (Mp) explorer |
| **Pelaman**    | (Mp) temporary huts |
| **Pemetaan Partisipatif** | (Ina) participatory mapping, another term of counter-mapping |
| **Pemogi pejalatn** | (Mp) area used by a family usually outside kampung |
| **Pemongkal**  | (Mp) hunting area |
| **Pemongkal peajuk** | (Mp) area for one-day hunting bout |
| **Penguatan kawasan adat** | (Ina) Strengthening of adat land |
| **Petinggi**  | (Mp) A title for a kampung leader in a given Dayak kampung granted by the sultan or local ruler under the indirect Dutch rule |
| **Plasma**     | (Ina) smallholdings of a nucleus estate scheme, introduced by the World Bank for large-scale plantations |
| **Pogi**       | (Mp) to travel |
| **Raat**       | (Mp) space |
| **Rumah adat** | (Ina) assembly house for adat matters |
| **Rupiah**     | Indonesian currency (IDR), exchange rate US$1 = IDR 9,000 (April 2007) |
| **Senganan**   | (Mp) a Dayak person who converted into Islam |
| **Suku**       | (Ina) tribe (in general) |
| **Tampil**     | (Mp) reciprocal work |
| **Tanah Adat** | (Ina) customary land for communal use |
| **Tanah ampah**| (Mp): place |
| **Tapakng**    | (Mp) honey tree |
| **Tata ruang tradisional** | (Ina) traditional spatial regime |
| **Tayak**      | (Mp) bawas, |
| **Tema’akng**  | (Mp) forest garden |
Temenggung: (Mp) an elected chief of suku
Ume: (Mp) land parcel being used for rice farming
Utatn raat: (Mp) may mean territory or environment
Knowledge production is not an innocent or neutral project. Every process of knowledge creation, validation, and dissemination is about the embodiment of politics. 
(Dei 2011, 2)

1.1. Introduction

It was just a regular day in early May 2007 for the villagers of Lembah Beringin, who live on the banks of Sekadau River. However, the house of desa head was crowded as a group of men gathered there. They were talking in groups, and each group was facing a large white paper on which one of the participants wrote notes of their village plan. A number of activists from an NGO from Pontianak (the capital city of West Kalimantan province), with whom I came, facilitated the meeting. This village was the last desa they visited in its participatory spatial planning project in the kecamatan of Nanga Mahap (Figure 1.1.), which was a joint effort with two other organizations. The project had two components in the kecamatan: delineation of desa boundaries (usually generated from kampung boundaries) and desa planning sessions.  

If in another desas, the delineation process would have taken a couple of days for surveying the boundaries, but in this particular desa the delineation was completed without much sweat. As the desa is surrounded by other desas, which had been surveyed earlier, the NGO activists assumed that the boundaries of Lembah Beringin were already settled. Therefore, in this desa the NGO only had a planning session with the participation of key figures of the desa, all were male.

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1Desa is equal to village, the smallest autonomous territorial unit headed by an elected kepala desa (village head). It has autonomy in managing its own resources. Kampung is an administrative unit under desa in West Kalimantan. Until 1987 kampung was also a desa. In that year the Governor of West Kalimantan ordered the regrouping of desa to meet the criteria set by the now defunct Law on Village Government (No. 5/1999), which grouped a number of kampungs into a desa. Kampung then becomes dusun, a territorial unit under desa.
While other villagers were busy discussing the village planning, an elder man approached the GIS technician from the NGO who was working on a laptop computer. On the screen was a map of another desa which was generated from the UTM coordinates taken with GPS units by surveying teams earlier in the project course. The river on the map ran north and thus upward. The technician looked at a sketch map of the kampung containing a river system and place names that another NGO activist and villagers drew and worked on previously. He typed in the names of the rivers on the map. The elder man looked at the map on the computer screen and asked the technician to turn the map upside down. The GIS technician responded that he could not do the request because the map was already set the way it was.

At that very moment I did not understand why the man asked such a question. After a while, I recalled my conversation with some men in another village from a previous mapping exercise and understood that the people in this area orient themselves following a river system from river mouth to the headwaters. Then it struck me that this
was what I was looking for throughout my research, an encounter between cartographic knowledge and local spatial knowledge in a mapping exercise. In other words, it was an encounter of different spatial knowledge systems; one is of the modern scientific knowledge, the other is what largely known as indigenous knowledge.

1.2. Cartographic Encounters

Since the early 1990s studies about interactions between modern and indigenous knowledge systems within cartographic enterprises have flourished. As some authors note (e.g., Latour 1987a, chapter 6; Mundy 1996; Turnbull 2000), surveyors obtain geographical knowledge from indigenous informants who have different knowledge systems. Such interaction cannot be perceived as mere encounter, because it occurred within mapping that can be considered as a political act. On the surface, to make maps is about presenting information (knowledge) about an area. However, the work is not without a purpose, especially if it is carried out or sponsored by the state. In state-sponsored activities, mapping means asserting a claim to control that mapped area. In the past indigenous persons did help the colonial entities to map the surrounding areas of their former settlements, but the maps turned out to be the very bases for colonial claims. For indigenous persons, their acts might only mean to share their knowledge, but for surveyors or travelers working for colonial entities, the knowledge was collected to appropriate new territories. Back then some indigenous groups in the Americas, at least, had produced maps of their own versions to challenge the colonial claims (e.g., Mundy 1996), though they finally lost their lands.

Lewis (1998a, 14) promotes this phenomenon as cartographic encounters, which he describes as “the acquisition of geographical information by alien cultures from indigenous peoples whose territories they are invading.” In his description he implies that the term refers to the encounters between different spatial knowledge traditions that occur either directly in the field or indirectly through the stored information. Such understanding suggests a focus on the encounters experienced by persons from Western modern cartographic traditions who try to collect geographic information on the terra incognitae to them, which in fact is the terra cognitae for the indigenous populations.
Using the example in North America, Short (2010, 12-13) argues that the encounters work two ways: the white Europeans made maps in their contacts with the Native Americans and, vice versa, the indigenous peoples produced maps in their contacts with the white Europeans. Turnbull (1998, 22-23) adds on to this understanding by showing the three roles of maps in the encounters in North America: to provide assistance to European explorers/invaders who requested a map to be drawn, to assert indigenous land claims, and to show their view of dispossession. In spite of the focus on the European colonial period, Lewis (1998, 14) reminds us that “the acquisition of geographical information by alien cultures from the indigenous peoples whose territories they were invading” is a very old process, even before Columbus landed on American soil.

In this setting, contestation of power and influence in knowledge production took place, since two different knowledge systems were in contact. In this encounter the scientific knowledge system dominated indigenous knowledge systems, although the former adopted information from the latter into its body of knowledge. Not only geographers take the interests (e.g., De Vorsey 1978; Lewis 1987, 1993; Rundstrom 1990), but also scholars in anthropology, English, area studies, and history of science (for example Belyea 1992; Bravo 1996; Moodie 1994; Mundy 1996; Turnbull 1998, 2000). So far, most scholars give much attention to such encounters in the colonial past of the Americas, and only very few study the encounter in other parts of the world (e.g., Winichakul 1994). Meanwhile it occurs until today and is even more interesting (see Warhus 1997). In the past it was the Europeans who took the advantages of such knowledge from indigenous peoples who then became dispossessed. Today the encounters also occur in counter-mapping in which the dispossessed peoples attempt to resist the erasure of their existence represented in state-sanctioned modern maps by reconstructing the knowledge about their places in order to put them back on the maps.

For indigenous peoples, whose worldviews are based on their relationship with nature, land and water are important part of their identities. Access to and control over land and water are crucial components of their social organizations and economic activities. As the modern states started to evolve, indigenous peoples lost their territories, which were then appropriated by the states. Such dispossession has led them to stage
resistance against the states—colonial and post-colonial—for centuries. After a number of failing tactics (including armed resistance) to reclaim their territories, indigenous peoples started using the language of hegemonic institutions in defending their lands using court system and by producing maps of the state standards. The maps are produced according to their knowledge of land uses as a part of their territorial claim process. If state mapping projects are a means to unilaterally claim the territory of the nation-state and resources within it while undermining people’s needs and interests, the mapping for indigenous groups is to counter the claim of nation-states by incorporating the knowledge and interests of local communities using participatory research methods. As it is a counter movement, such mapping is called counter-mapping (Peluso, 1995).

It is expected that through mapping they are able to assert their own ways of managing territories, as opposed to the hegemonic scientific-based management techniques. Mapping back their territories also means that they can name the places ‘properly’ using the original indigenous names. By mapping the claims over the territories, they express their resistance to the states.

Counter-mapping is therefore a form of social movement that employs cartographic techniques to put dispossessed peoples back on the (modern) maps (modified from Peluso 1995). In the counter-mapping movement the peoples are expected to be the mapmakers and the map users at the same time, or, as Stone (1998, 54) puts it, “mapping of, by and for the people.” Such statement implies a more participatory nature, which makes it different from other cartographic encounters. The movement grew from participatory methods that emphasize dialogue in knowledge production, and it tries to break the scientific knowledge-indigenous knowledge dichotomy by incorporating local/indigenous knowledge into cartographic maps. As a strategy, it uses the opportunities provided by the growth of spatial technology. The

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2Robert Rundstorm, a cultural geographer, reminded me that counter-mapping also occurred in colonial time as many indigenous groups produced ‘maps’ to counter the territorial claims of colonizers. However, in this paper I will limit my understanding to Peluso’s definition, since my purpose is to assess the implication of adopting cartography into the movement.

3Because of this nature, the term ‘participatory mapping’ is more popular in Indonesia, which sounds friendlier than ‘counter-mapping.’ The latter, to some people, has a notion of negativity. I maintain to use ‘counter-mapping’ to show the political nuance that it bears, because in this dissertation I posit myself in favor of indigenous self-determination.
increasing availability of low-cost geographic information systems (GIS) and hand-held geographic positioning systems (GPS) greatly enables them in materializing their goals and reduces the role of cartographers in making maps and thus challenges state monopoly on mapping. A hand-held GPS now turns into a new ‘weapon’ in defending indigenous territories by taking geo-referenced points. In Nicaragua, the indigenous mappers even refer to themselves as “GPSistas” (Dana 1998). Mapping indigenous territory is thus a new method of insurgency and a new means of territorial reclaiming (including through legal battles such as in the United States, Canada, and Aotearoa/New Zealand). Using Hess’ (1995, 229) term, these spatial information technologies become the “technologies of resistance” that allow less powerful groups to reconstruct the technologies. Hence counter-mapping is both a social movement and a methodology.

Although it has just been recently studied, counter-mapping is actually an old phenomenon. Records show that the acts of mapping for countering land claims occurred in the United States during the 19th century. There are other names that refer to the same type of mapping: traditional occupancy and land use study, indigenous mapping, community mapping, cultural mapping, participatory mapping, aboriginal mapping, ethnocartography, participatory GIS (PGIS), public participation GIS (PPGIS), etc.

1.3. Critical Cartography

The transition to the twenty-first century represents an interesting phase of cartography. It has contributed towards a democratic society, but at the same time is being challenged to democratizing itself. In the past map reading and use was limited to the modern life of Western societies (e.g., Brückner 2006), but has now spread as a daily activity throughout the modern world. Mapping and mapmaking also become more accessible to non-cartographers due to the rapid expansion of user friendly computer-based mapping technologies. Everyday thousands of maps are produced for different purposes in a wide range of formats. However, a strong criticism to these developments is that cartography tends to prevail Western spatial knowledge, while discounting the existence and contribution of other spatial knowledge systems in its dev
elopment. It has become a dominant knowledge of the mainstream society and, at the same time, puts itself as universal knowledge. This notion is clearly an example of unequal power relations in scientific endeavor.

With the pioneering work of Brian Harley power relations in cartography have become an important subject in the history of cartography and geography. Influenced by the writings of poststructuralist scholars, Harley (1989) treats maps as texts to understand the tropes embedded in the maps, thus enable us to problematize their production and meanings. He laid a foundation for the study of the acts of mapping and mapmaking as cultural politics in which contestations within the chain of activities in producing the maps occur. This establishes an understanding that knowledge production in cartographic enterprise is ‘a struggle over narrative’ especially between cartographers and local communities (including indigenous peoples). This is, I think, the very core of critical cartography.

This newly introduced approach is “a pervasive set of imaginative mapping practices and a critique highlighting the politics of mapping” that “resist[s] and challenge[s] the received method and practice of mapping established when cartography became an academic discipline” (Crampton & Krygier 2006, 12). Such approach questions the existing theories and practices of cartography and treats mapping as a political act that can be done by everybody. The main concern is thus to understand the politics of knowledge of the production and use of maps. It has three components: to examine the foundation of our decision-making knowledges; to examine the diachronic relationship between power and knowledge; and to destabilize our categories of thought (Crampton & Krygier 2006, 14). It is probably because of such characteristics that counter-mapping can be considered as a part of critical cartography. Wood and Krygier (2009, 343) argue that counter-mapping is an act to counter “the mapping of professional cartography” by ‘re-mapping’ community lands and waters “according to the rich diversity of [community] knowledge.”

With such understanding, the idea of critical cartography provides a strong foundation for counter-mapping. It also appeared in a time when mapping technologies
are no longer the monopoly of the experts (cartographers), since the business world provides technologies that enable more people to make maps. However, the reality is that the technologies privilege Western science over indigenous knowledge.

1.4. The Science-Indigenous Knowledge Divide

As some authors note surveyors obtained geographical knowledge from indigenous informants who have different knowledge systems within the context of cartographic encounters. In this setting a cultural politics of knowledge production takes place, since two different knowledge systems were in contact in which the scientific knowledge system dominated indigenous knowledge systems, although the former adopted information from the latter into its body of knowledge. This issue has been taken up by scholars who study science and technology under an overarching banner of science and technology studies (STS).

Science and technology studies (STS) is an interdisciplinary field that attracts philosophers, sociologists, historians, anthropologists, and researchers in cultural studies and feminist studies (Hess, 1997). Each of the first three professional groups has long studied science and technology, while the rest came later when the questions of social practices and power arose within the field. Although the history of cartography has long dealt with the issues similar to those of STS (such as history of mapping technology, mapping and statecraft, and mapping and colonialism), geographers only began to enter this field recently (see Livingstone 2003). Meanwhile maps have become an important topic in STS (see Turnbull 1993).

In his excellent introductory book Hess (1997) divides STS into four traditions: philosophy of science, institutional sociology of science, sociology of scientific knowledge, and critical and cultural studies of science and technology. The first tradition studies “the prescriptive and descriptive approaches to science and technology” (Hess 1997 7) assessing them from different philosophical schools of thought and putting them within the “discussions of policy and activism” (Hess 1997, 8). The second tradition, evolved from the sociology of occupations, emphasizes on “the exogenous, institutional
aspects of science and technology” (Hess 1997, 81). Due to its strong dose of functionalism, a school of thought that was dominant in sociology during 1950s and 1960s, it studies the definitions and dynamics of scientific and technological professions. The third tradition emphasizes on the content of science with its constructivist approach. It examines the ‘black box,’ the internal mechanisms of science and technology to understand how exactly scientists produce knowledge, including different factors that affect it. It strives “to trace the way in which social interests, values, history, actions, institutions, networks, and so on shape, influence, structure, cause, explain, inform, characterize, or co-constitute the content of science and technology” (Hess 1997, 82). The last tradition, with the strong influence of cultural studies, focuses on power relations within science and technology and their roles in enabling social transformation. In this research I mostly employ the approaches of the last tradition.

Critical and cultural studies of science and technology, set within Western Marxist tradition, treat science and technology as cultures and deal mostly with power relations of these cultures, within themselves and in society. As Hess (1997) confesses, the difference between the cultural studies and critical components of this tradition is very difficult due to their overlap that are not continuous. With an emphasis on fieldwork, ethnographic interviews and archival research, he argues that cultural studies of STS tends (Hess 1997, 113):

to focus on questions of culture and power (particularly as theorized from feminist, postcolonial, antiracist standpoints), to problematize contemporary science and technology historically as part of the postmodern condition, to examine how nonexperts and historically excluded groups reconstruct science and technology, and to forge alliances between researchers and activist/interventionist social agenda.

Critical STS can be employed to describe “the confluence of research traditions that … are concerned with issues of social justice and democracy” (Hess 1997, 113). Although the difference between both approaches is fuzzy, the strong themes in this tradition are cultural politics and democratization of science and technology. Many scholars in this tradition perceive that science and technology are intertwined in their practices, therefore they tend to combine them. Bruno Latour (1987a) coins
technoscience as a term to describe it, though he realizes its messiness as the term “describe[s] all the elements tied to scientific contents no matter how dirty, unexpected or foreign they seem” (Latour 1987a, 174).

Harley-influenced research projects in cartography also deal with social practices and power relations in mapping and mapmaking. However, with much attention to the colonial past, the cultural politics of mapmaking in present (post-colonial) context has not yet been studied. From such few studies, Sparke (1998) analyzes the cultural politics of mapping in litigation of indigenous land claims in which oral forms of spatial representation was accepted as evidence. With the growing number of mapping exercises carried out by and or for indigenous communities, the interaction of cartographic knowledge and other spatial knowledge systems continues to exist. The recognition of non-Western knowledge traditions and the interaction of different knowledge traditions are what postcolonial STS tries to understand. However, it is not an easy enterprise as there is an existing great divide of technoscience and non-Western knowledge systems.

The term knowledge system is used because knowledge is a product and a form of social processes at the same time. Stephen Marglin (1990, 232) argues that there are four characteristics of knowledge that make up knowledge system, i.e.,:

- epistemology (“how do we know what we know?”),
- transmission (“how do we go about distributing and receiving knowledge?”)
- innovation (“how does the content of what we (collectively) know get modified over time?”), and
- power (“what are the political relationships between the members of a community who make use, in greater or lesser, measure, of the same system of knowledge? And how does a particular knowledge community relate to other knowledge community?”)

The term also suggests a diversity of ways of knowing and the inter-linkage among all characteristics of knowledge which “underlie[s] each particular way of knowing.” By using the term we perceive it not only as a body of knowledge but also the cultural, social
and political institutions attached to the term. Because it should be understood “to be embedded in, formed by, a product of culture” (Gorenstein 1998, 1).

Sandra Harding, an influential theorist of postcolonial STS, began to introduce the postcolonial thinking into science and technology studies in early 1990s. She argues that the tradition grew as a critique to science and technology, which is informed by comparative ethnoscience studies, anti-Eurocentric histories of science and technology, the criticisms on the development Discourse, and feminist critique. It has a strong political agenda because by embracing postcolonial theories it engages in the “continuing process of resistance and reconstruction” of technoscience. Such approach is very useful because the dominant Eurocentric view of science sees Western science as the only science, whereas a large number of other knowledge systems are not. As Selin (1997, xv) observes, “[in] this view, Western science is science; everything else is anthropology.”

With its strong attempts to reveal the Eurocentrism in the history of technoscience by providing evidences of the contributions of other knowledge systems this approach can “provide more objective representations of Western science, their histories and philosophies” (Harding 2001, 50-51) further theorizes that postcolonial STS is “a call for more realistic and less romantic analysis and evaluation” of Western knowledge systems which views power relations as “discursive codes that enable some and restrict others,” and de-centering the subject of science – the “Enlightenment’s rational man” – as “a single, homogeneous, speaker of science truths.” It is “organized from the standpoint of other, non-European cultures and the great masses of the world’s economically and politically most vulnerable people who live in them,” and is “interested to propose which kinds of sciences will most advance both the growth of knowledge and the social welfare of the most vulnerable groups in their cultures”

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4Ethnoscience emerged as a method rather than a field within anthropology in 1950s. Sturtevant (1964) explains that he term ‘science’ here actually means ‘classification,’ while the prefix ‘ethno’ means “the system of knowledge and cognition typical of a given culture” (p. 99). Therefore, ethnoscience is actually “the sum of a given society's folk classifications, … its particular ways of classifying its material and social universe” (p. 100). The society in this regard is that of non-western. Furthermore, the term implies that the folk knowledge is not valid knowledge vis-à-vis science. Today, anthropologists note that the term is problematic. Nonetheless, Hess (1995) provides a working definition which is “an umbrella term to cover the study of various non-Western systems of knowledge” (p. 187).
A strong tendency among the researchers of this group is to treat scientific knowledge system as another indigenous knowledge system. As Harding (2001, 50) puts it, science and technology is “one powerful form of ‘folk knowledge’ of educated classes in the West.” Such treatment implicates the positioning of non-Western knowledge systems as equal as technoscience. It then allows rooms for dialogues between these knowledge systems.

Adopting such understanding, Turnbull argues that a knowledge system grows within a knowledge space: “a complex heterogeneous blend of knowledge, practice, trusted authority, spiritual values and local social and cultural organization” (1997, 560). This space is “both situated and situating. It has place and creates a space” In other words, knowledge system emerges from place, so it should be embedded in place. It is inherently local, be it in a forest, a village, a laboratory, or a classroom. Turnbull (2009, 3) then argues that local knowledge is not only the knowledge generated by local communities, but instead it “a generic term referring to knowledge generated through observations of a particular environment or at a particular site and produced by a specific group of people with specific practices and tools.” Thus, as Turnbull (2008, 1198) further writes, “[t]hough knowledge systems may differ in their epistemologies, methodologies, logics, cognitive structures, or in their socioeconomic contexts, a characteristic that they all share is their localness.”

Within social sciences sociologists and anthropologists have dealt with knowledge as a research topic. Sociologists have a long tradition of studying the social aspects of knowledge, though the knowledge they refer to is technoscience. Because of its emphasis the subfield is also known as the sociology of scientific knowledge (SSK) with the emphasis on laboratories. Anthropological interest started with ethnoscience as a study on knowledge in non-Western cultures. Later this interest grew in order to investigate the indigenous knowledge as ‘new’ sources for local initiatives to mitigate the problems created by top-down development projects (Sillitoe 1998, Ellen 2004). Later scholars on education studies began debating science education in non-Western societies through the issue of multicularism in science (e.g., Aikenhead 1996; Cobern & Loving 2000; Stanley & Brickhouse 1994).
The expanding literature on knowledge systems in anthropology and sociology generally classifies the contemporary knowledge systems into two major groups. One is western knowledge system, which is also known as scientific knowledge. The rest of the existing knowledge systems of non-Western societies are lumped into a large category of indigenous knowledge systems. Agrawal (1995, 433) suggests the distinction as problematic because it undermines the possible similarities between both groups. Nonetheless, the science-indigenous knowledge divide continues to exist within academic circles and policy making bodies of the state and corporations with their dominant Eurocentric views on knowledge.

The relations between technoscience and other knowledge traditions have captured the attention of many scholars in anthropology, sociology, history of science, and education. Most of them focus on the power relations between technoscience and other knowledge traditions, while some expose the contribution of non-Western knowledge traditions to the development of technoscience. To understand more about this power relations, I want to discuss the characteristics of each category and how both work in interaction to each other. I certainly cannot do justice to explain the complex array of the nature of both categories, especially on technoscience with its extensive literature and long history of scholarship in Western institutions. What I discuss here is only to give a context to the discussions throughout this dissertation.

The Western knowledge system grew from Cartesian dualism that previledges reason over the corporal body and a separation of human beings from nature. With such notion it tends to objectify the natural world. It seeks the laws of nature to explain about the phenomena surrounding us through specific method of reasoning, scientific method. Through this method, as Bird (1998, 14) suggests, “the basic aim of science is to provide an accurate representation of the world—what sorts of things are in it, how they interact, what explains what, and so on.” With such aim, technoscience highly depends, as Latour (1987b) notes, on vision (as a means of inscription) and measurement (to ensure universal application of the knowledge). Based on these, Achinstein (1998, 89, italics in original) lists the widely adopted characteristics of science which “(1) is empirical, (2) seeks certainty, (3) proceeds by the use of a scientific method, (4) describes the observable
world, not an unobservable one, and (5) is cumulative and progressive.” Sismondo (2010, 1) provides another explanation: “science is a formal activity that creates and accumulates knowledge by directly confronting the natural world. That is, science makes progress because of its systematic method, and because that method allows the natural world to play a role in the evaluation of theories.” Also science is seen to be “universal, non-indexical, value free, and as a consequence floating, in some mysterious ways, above culture” (Turnbull 1997, 486).

The history of technoscience began in Renaissance Europe and has evolved through a series of cultural, economic and political changes in the continent since 17th century. This knowledge system uses information from other cultures, primarily from Egypt, Islam, China and India. Therefore, while rooted in Western European culture, as Turnbull (2000) points out, in this sense technoscience is also an indigenous knowledge system. But the contributions are rarely acknowledged, if not systematically silenced, and its localness is denied.

Using the case of indigenous knowledge, Battiste (2002) argues that such silence has resulted in the invisibility of indigenous knowledge and a view that indigenous peoples “as backward and passive recipients of European knowledge” (p. 4). It comes from the treatment that indigenous knowledge is a binary opposition of the “‘scientific, ‘western,’ ‘Eurocentric,’ or ‘modern’ knowledge” (Battiste 2002, 5). It becomes the ‘cognitive other’ (Battiste 2002). A divide between technoscience and indigenous knowledge systems thus exists, which of course cannot be separated from the notion of divide between the West and the rest or the colonizer and the colonized, that is the core of colonialism. With the expansion European political and economic power since 500 years ago through their imperial project of the past and the development programs at present, technoscience has become global.

There are a large number of accounts on the introduction of technoscience to population beyond Europe during the heyday of colonialism. For example, a number of scholars, mostly Dutch naturally, wrote the development of colonial science in Indonesia, both as a report during the colonial time (e.g., Honig & Verdoorn 1945) and as an analysis of the colonial past (e.g, Pyenson 1987; Boomgard 2006). The introduction had
two-pronged goal: civilizing the ‘uncivilized,’ ‘primitive’ indigenous populations toward progress and developing economic enterprises in the colonies for the benefits of the colonizers.

After the colonial states dissolved and transformed into new independent states (the South), technoscience continues to dominate the postcolonial societies as the nation-states perceive it as ‘a passport to modernity’ (Visvanathan 2002, 92) to keep up with the former colonizers (the North). Development programs employ technoscience under the auspices of multilateral agencies such as UNESCO and the World Bank as well as bilateral donor agencies from the North such as US Agency for International Development (National Research Council, 2006). These agencies promote the view that without technoscience the populations of the South will still be backward or underdeveloped and isolated from the rest of the world. Southern elites adopt science within the context of nationalist ideology and even national security (Abraham, 1996; Amir, 2004). Strategies of professionalization and institutionalization, Escobar (1995) argues, are then employed by bringing in an army of development experts and producing new generations to implement technoscience in development projects and ensuring that the values and practices of “[development] [D]iscourses are produced, recorded, stabilized, modified, and put into circulation” (p. 46). As Harding (2001, 50) puts it, the application of techno-science is “progressive in one social context [but] can end up supporting regressive political and intellectual tendencies in other contexts.”

Indigenous scholars argue that the application of techno-science disrupts the lives of indigenous peoples, as its worldview and epistemology are completely different from those of indigenous peoples. Furthermore, the imposition of scientific knowledge onto indigenous peoples became an important means of the colonial project, placing indigenous knowledge in an inferior position. Due to the revitalization of indigenous cultures that goes along with the growth of indigenous movements, indigenous peoples have repositioned indigenous knowledge systems as valid knowledge. Linda Smith (1999), for example, proposes to resurrect indigenous peoples’ ability to carry out research through a focus on indigenous epistemology. However, the hegemony of techno-science continues to prevail, because global scientific networks claim the
universality of their knowledge system. Nonetheless, through an anthropological perspective, “Western science is a manifestation of Western culture” (Gorenstein 1998). This premise means that (a) technoscience is cultural laden and is “not accessible to and compatible with all knowledge systems,” (b) it cannot claim as a pan-human knowledge, and (c) it is not the lingua franca of knowledge systems (Gorenstein 1998, 5).

Indigenous knowledge systems are generally based on the belief that human beings are a part of an intricate web of spiritual and material beings and phenomena. George Cajete, a Native American scholar and educator, provides an excellent explanation on the term. He writes (Cajete 2000, 2):

Native science is a metaphor for a wide range of tribal processes of perceiving, thinking, acting, and ‘coming to know’ that have evolved through human experience with the natural world. Native science is born of a lived and storied participation with the natural landscape. To gain a sense of Native science one must participate with the natural world. To understand the foundations of Native science one must become open to the roles of sensation, perception, imagination, emotion, symbols, and spirit as well as that of concept, logic, and rational empiricism.

With such understanding Indigenous pedagogy, therefore, stresses on experiential knowledge. In this regard a person has to be able to “learn independently by observing, listening and participating with a minimum of intervention or instruction” (Battiste 2002, 15). To transfer and store knowledge, indigenous languages with “their symbolic, verbal and unconscious orders” are central as they structure the knowledge itself (Battiste 2002, 17). Language is thus at the core of indigenous epistemologies that can lead to self-determination because they are rooted in the “ways of living and making a living in particular locales” (McCarthy et al., 2). It also refers to “the different sources of knowledge and the different methods for teaching and learning that exist within the social, cultural, ecological, and epistemological contexts of local communities”

There are a number of terms that are used in the literature referring to the same body of knowledge: *ethnoscientific, indigenous knowledge, traditional ecological knowledge, local knowledge or wisdom, indigenous traditional knowledge, indigenous technical knowledge, native science, indigenous science, non-formal knowledge*, and so
on. Most of the terms tend to be denigrating or at least discriminating the knowledge and, thus, its knowledge holders.

With such notion the politics around this term and the body of knowledge itself is quite lively and interesting from the local up to the global levels. Most scientists – particularly natural scientists, are wary with the equal treatment of indigenous knowledge. The World Conference on Science in Budapest (Hungary) in 1999, for example, agreed to include indigenous knowledge within its Declaration on Science and the Use of Scientific Knowledge. Using the term “traditional and local knowledge systems,” paragraph 26 of the Declaration recognizes the importance of indigenous science in providing “valuable contribution to science and technology, and that there is a need to preserve, protect, research and promote this cultural heritage and empirical knowledge” (UNESCO 2000, 463). However, as shown in a resolution of the International Council of Scientific Unions, many scientists reserve the inclusion of other knowledge systems as it can “promote anti-science and pseudo-science” and “degrade the values of science.” In another global arena, the United Nations (UN) has committed to protect and promote indigenous knowledge as shown in Article 31 of the UN Declaration on the Rights of Indigenous Peoples and Article 8(j) of the Convention of Biological Diversity. A special body on indigenous affairs, the Permanent Forum on Indigenous Issues (UNPFII) in which indigenous interests are strongly represented as the chair is usually an indigenous person, has a special concern on this issue by discussing it (United Nations 2009, 64).

The growing literature on indigenous knowledge by non-indigenous scholars focuses on Indigenous knowledges as alternatives to technoscience, particularly in natural resource management and its contribution to development. But in doing so, scientists attempt to place indigenous knowledge within scientific resource management, only treating indigenous knowledge as a body of information that needs to be ‘filtered’ or “sanitized” to conform the scientific management regime

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5Section 1 of the Resolutions of the 26th General Assembly of ICSU – International Council for Science.
Responding to this, indigenous scholars are critical to this literature. Battiste (2002), for example, reveals three main approaches of Eurocentric view of indigenous knowledge. The first is taxonomic approach which mostly searches “the differences between Eurocentric and Indigenous knowledge in terms of their respective ideological underpinnings, substance, methods, and so forth” and thus showing the superiority of “Eurocentric knowledge” (Battiste 2002, 10-11). The second approach is concerned with the validity of indigenous knowledge by looking at “its quantifiably observable empirical elements” (p. 10). This approach emphasizes the ability of indigenous persons as “good field observers of biophysical phenomena” so that they can act as “data collectors for modern scientists” (p. 11). Furthermore, it documents the contribution of indigenous knowledge to science within the contexts of development projects. This is what Agrawal (1995) calls neo-indigenistas – who work on documenting the indigenous knowledge and detach it from the original community through their ex-situ preservation approach. Finally, the third approach treats indigenous knowledge as “purely normative or spiritual” (p. 11) which tends to freeze the knowledge. This approach somewhat sees indigenous knowledge as ‘sacred’ and, thus, “immutable and inviolable” (p. 11).

By questioning the Eurocentricity of science, many scholars (many of whom are indigenous persons) position indigenous knowledge as equal to Western science. Such positioning is also a means of decolonizing science and advocating self-determination. They are advocating that indigenous peoples are knowing subjects who have their own ways of thinking. Dei (2011a, 2), for example, clearly asserts:

I see Indigenous knowledge as philosophy, specifically as a body of Indigenous social thought embedded with critical, oppositional, and resisting knowledge and counter narratives for decolonization. In other words, Indigenous knowledge as a body of Indigenous thought has located itself contrapuntal to dominant knowledges, in that, the Indigene reveals itself through resistance, as counter-hegemonic and as tangential to conventional knowledge systems.

He also shows the close between knowledge and identity by saying: “To claim ‘Indigeneity’ is to validate and work with Indigenous knowledges” (Dei 2011a, 4). Selin

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6The latter is important as the knowledges of indigenous peoples are tightly linked to place. Therefore, the rights to their territories have to be recognized and protected to ensure them maintaining their livelihoods.
(1997, xviii) also suggests the same line by saying that “the study of non-Western science is not just a study of facts, but a study of culture and philosophy.” Therefore, it is also an attempt to advocate that the world we live in is culturally diverse. It has also psychological implications as it is an attempt “to heal [the] people, restore their inherent dignity, and apply the fundamental human rights” (Battiste 2000a, xvi).

Many indigenous scholars maintain to use the term indigenous knowledge (Battiste 2000b; Dei 2011b), whereas some other scholars use the Native/Indigenous science. The first group, as represented by Dei (2011a, 4), argues:

Indigenous knowledge is primarily about epistemology. Like every body of knowledge, Indigenous knowledge has its own ontological, conceptual/philosophical, methodological, and axiological groundings. Indigenous knowledge is science, philosophy, and practice of knowing about one’s existence.

The second group, many are scholars of science education such as Snively and Corsiglia (2001, 8), use the term “indigenous science” but implying “how the world works from a particular cultural perspective.” Regardless which term we use, if we understand science “as a way of understanding the world, a story of how things happen, a way that human beings have evolved to try and explain and understand existence in time and space and relationships vis-à-vis the natural processes of the world” (Cajete 2000, 3) then we can accept that every culture has science. Therefore, for indigenous knowledge systems the label ‘science’ can be used interchangeably with ‘knowledge’ because “Indigenous science encompasses all of the kinds of knowledge that are part of Indigenous mind-set” (Cajete 2000, 4).

Despite all these facts, the distinction between scientific knowledge and other knowledge traditions is difficult in this contemporary world, as both traditions affect each other (e.g., Brodt 1998; Ellen 2004). Therefore, it is very unlikely that a scholar can find a ‘pure’ indigenous knowledge or, on the other hand, technoscience (especially biology) that is not influenced by indigenous science. Therefore, rather than emphasizing

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7Snively & Corsiglia (2001), however, differentiate the term with indigenous knowledge, which is another label for traditional ecological knowledge and a subset of indigenous science. Unfortunately, they see indigenous science as a contributor to Western science. Therefore, they work within the mainstream scientific Discourse which Carter (2004) reveals.
technoscience-indigenous knowledge divide which tends to be unproductive, we need to find ways that knowledge systems can learn from each other meaningfully in an equal position, a proposal that I want to put forward in this dissertation.

To explore this proposal I want to show how the interaction of technoscience (in this case scientific cartography) and indigenous knowledge plays. As knowledge system is essentially local, place can be the basis to assess the cultural politics of knowledge production and interaction between knowledge traditions. Because of its nature as place-based social movements, counter-mapping is an excellent example of this regard.

1.5. Current Knowledge of Counter-mapping

Under different phases, from European colonial expansion to contemporary nation-state building and development programs, indigenous peoples have struggled to maintain their knowledge systems. In many cases their friendly gestures of welcoming the colonizer and sharing information has been disastrous. Short (2009, 13) calls this phenomenon as “symbiotically destructive relationship” in which Indigenous peoples lost their land during the cartographic encounters despite their intention “to parlay their deeper and wider knowledge of the land into a strong bargaining position.” It is in this context that cartographic encounters occur between modern cartographic knowledge and practices and other spatial knowledge tradition(s), generally in situations of unequal power relations. Europeans initially used surveying and mapping to order their homelands, and then reordered the space of their colonial possessions (Mitchell 1988; Basset 1994; Edney 1997; Edney 1997; Biggs 1999). Colonized peoples were frequently dispossessed, often losing control of land and resources.

Histories of dispossession have been an important topic among the social scientists, historians, and literary studies who assess the politics of land and natural resource management in the colonial past and its legacy to the present day. In geography Derek Gregory (1994, 168-174) provides a theory by suggesting three strategies of dispossession took place during European colonization. Inspired by Edward Said’s Orientalism, the first is dispossession through Othering in which non-Western societies are considered as completely different from the Western societies. The former had such
labels as primitive, irrational, backward, etc. Consequently, the ‘irrational’ Orient needed to be controlled and civilized under “the technologies of Western rationality” (Gregory 1994, 171). Their lands were then taken over as they were considered to be incapable of managing the lands. This was probably more so, I think, since the West judged that there were no signs of agricultural practices on the lands and led to the notion of *terra nullius* (empty land) within the doctrine of discovery. Secondly, borrowing the ideas from Paul Carter’s reflection on the exploration of James Cook in Australia, *dispossession through naming* imposes new landscapes over the indigenous landscapes by giving the land with European names. Carter calls this as a ‘spatial history’ where the landscape of Australia was brought “within the horizon of European intelligibility through the multiple practices of naming in order for colonization and dispossession to be set in contingent motion” (Gregory 1994, 171). The third is *dispossession through spatializing* where the colonial power rationalized the landscape by ordering the territory scientifically. Learning from Timothy Mitchell’s analysis on the European colonization in Egypt, this strategy emphasizes how the colonial powers (French and English) established a spatial grid of control over the people and resources in a colonized territory as a means to bring them to global market circulation.

Such strategies of dispossession continue to exist in many post-colonial states where central governments employ the same approaches as previous colonial administrations, including the use of surveying, land-use and resource mapping and zoning. Through such means of territorial control, the state has been able to secure state lands that can be granted as concessions (logging, plantation, and mining) or sold for real property development. In short, the state employs enclosure project so that it can “appropriat[e] land, resources, and people both to turn into commodities and to ‘free’ – or create – a labor force to work and make capitalist accumulation possible” (Nevins & Peluso 2008, 3).

All of these not only cause spatial dispossession, but also pains to most indigenous peoples. To counter the negative environmental and social impacts of these enterprises, indigenous peoples began to employ counter-mapping.
The contemporary counter-mapping movement started in Canada. Amidst a number of legal battles on aboriginal land rights, in early 1973 the Inuit people through the Inuit Tapirisat of Canada (ITC) requested the Minister of Indian and Northern Affairs to conduct research in order to “produce a comprehensive and verifiable record of Inuit land use and occupancy for the Northwest Territories and Labrador.” A group of consultants carried out this study and produced a three-volume final report in 1976. The Inuit Land Use and Occupancy Project employed a combination of oral history, European travel accounts and archaeological excavations. All of this information was compiled into a set of maps that became the bases of the territorial claim of Inuit people (Freeman 2011) for a settlement agreement with the Government of Canada in 1993 leading to the creation of Nunavut territory in 1999. Other mapping project followed this approach with ‘map biography,’ individual interviews on land use and hunting areas, as the main means to collect information.

The movement and its tactics gained popularity during the 1990s because it seemed to give new opportunities to local communities to manage and protect their lands and waters. It has spread to many corners of the world, particularly where spatial conflicts over lands and waters arise. The power embedded in maps inspired environmental groups and dispossessed peoples to employ cartographic techniques to protect and defend the access to the resources. Wainwright and Bryan (2009, 154) name this approach as ‘the cartographic-legal strategy’ because it “calls for making maps to advance legal recognition of [community] land rights.”

As Aberley (1993, 4) argues, the movement promises to “[take people’s] aspirations for social justice and ecosystem continuity into the terrain of empowerment and practice.” Wainwright and Bryan (2009, 154) suggest that many proponents perceive the movement as “a practice of replacing bad colonial maps with good anti-colonial ones.” By 1995, when Poole (1995b) compiled a bibliography for the Cultural Survival Quarterly at least 63 projects were in existence. Today there are a number of books,
special edition of journals\textsuperscript{9} and websites\textsuperscript{10} dedicated specifically to counter-mapping, though many of them are on the methods. It also began to enter to the Discourse of multilateral organizations, such as the International Fund for Agricultural Development (Corbett 2009). In the 1990s the proponents of counter-mapping emphasized its potential to assist the goals of local/indigenous communities to defend and manage their lands and resources.

While this was occurring, in geography a number of human geographers were beginning to question the power relations embedded within GIS. A heated debate arose between human geographers and GIS scientists, aptly described by Schuurman (2000) as a ‘science war’ within geography. Initiated by Peter J. Taylor, a political geographer, who pointed out the traces of quantitative revolution within GIS, the debates were between social theorists and GIS scholars. The former argued that GIS was facing a crisis because it was a mere tool within geography anwhile the GIS scholars argue that their subfield is a legitimate part, even the core, of geography In addition, human geographers with postmodern leaning criticized GIS for its lack of sensitivity to societal interests, particularly as it gave unparallel surveillance power to those who controlled the technology, as pointed out by the contributors to the publication of *Ground Truth* (Pickles 1995). The debate led to the emergence of critical GIS (Schuurman 1999), which is based on the assumption that GIS is socially constituted and has social consequences, including its impacts to different knowledge systems (Sheppard 1995a). An important outcome was the development of public participation GIS (PPGIS), in which the technology could be used in participatory planning especially in Northern countries where computers and spatial information are readily available. Examples of mapping of this nature are: community mapping to promote sustainable lifestyles (Parker 2006), urban neighborhood revitalization project (Elwood 2006), and web-based GIS for local planning (Carver \textit{et al.} 2001).

In Southern countries where the idea of participatory development was popular, another trajectory of GIS application occurred. Development practitioners and NGO

\textsuperscript{9} PLA Notes No. 54 (2006), Cultural Geographies Vol. 19 No. 2 (2009)

\textsuperscript{10} For examples, www.iapad.org and www.nativemaps.
activists had been exposed to, and employed, participatory rural appraisal (PRA) in early 1990s. This method has a participatory resource mapping component (Mascarenhas & Kumar 1991; Mascarenhas et al. 1991). The introduction of GIS into the participatory methods, particularly PRA and participatory planning, has led to participatory GIS (PGIS). Partly informed from the debates within critical GIS stream, the scholars of participatory methodologies have raised ethical questions on the GIS application in the research methods, including the questions of map ownership, access to maps, and types of knowledges (Abbot et al. 1998; Chambers 2006).

Most writings by social scientists, particularly political ecologists, assess counter-mapping in the context of resource politics, the contestation between different actors in natural resource use. They tend to deal with the notions of territoriality and community, which further affects boundaries and identity (Hodgson & Schroeder 2002; Peluso 1995, 2005) well as differentiated access to mapping technology, primarily GIS (Weiner et al. 1995). Identity politics has recently become an important topic on the research on counter-mapping, especially among cultural geographers, in which the mapping and maps construct the identity of community whose land is mapped (Knapp & Herlihy 2002; Offen 2003). Others look at competing knowledge in natural resource management that might be incorporated in maps (Robbins 2003). Acknowledging both positive and negative impacts of modern mapping to local communities, political ecologists see the empowering and disempowering potentials of counter-mapping (Harris & Weiner 1998; Rocheleau 2005) or what Wainwright and Bryan (2009, 161) call as ‘differential empowerment.’ Others, mostly anthropologists focus on the ethnography of counter-mapping, or on the usefulness of the methods, including in courts (e.g., Orlove 1991, 1993; Sparke 1998; Eghenter 2000; Chapin & Threkeld 2001; Chapin 2005; Cook 2003; Sletto 2009; Wainwright & Bryan 2009).

1.6. Framing the Research

1.6.1. The Research Space

In this dissertation I will use two concepts proposed by Pratt (1992) that deal with the relations between the colonizer and the colonized in order to understand the
power relations between the two types of knowledge systems. The first is contact zone that is the “space in which peoples geographically and historically separated come into contact with each other and establish ongoing relations, usually involving conditions of coercion, radical inequality, and intractable conflict” (Pratt 1992, 6). This encounter was in forms of “co-presence, interaction, interlocking understandings and practices” (Pratt 1992, 7) between the colonizer and the colonized that could involve knowledge production. Yet with the belief that his reasoning was right and thus superior, the colonizer imposed his own values and meanings in producing the knowledge about the colonized and the place, while ignoring or erasing the latter’s values and meanings. The second concept is autoethnography that refers to the “instances in which colonial subjects undertake to represent themselves in ways that engage with the colonizer’s own terms” (Pratt 1992, 7). In this setting the colonized adopts the colonizer’s ‘language’ as a means to communicate with the latter. Even though they are originally for a colonial setting, I find both concepts can be applied in current situation as the same power relations still exist. Looking at the nature of cartographic encounters both concepts apply in the mapmaking processes. I discuss the issue further by looking at the interaction of human agency in knowledge production, primarily through through their Discourses, which I explain below.

1.6.2. The Politics of Mapping

As artifacts, maps are the representation of spatial knowledge. Representation is a process of transforming the facts into, one or combination of, oral, visual, textual, and performative formats. In representation not only information is transmitted but also meanings and values. Representation thus embeds in culture; producing knowledge representation is filtering the ‘nature’ through a particular set of meanings and values of a given culture. It means that knowledge representation of one culture is likely different from other cultures. With its distinct philosophical foundations, scientific representation is very different from representations of indigenous knowledge systems. If we employ a representation of one culture for the other, it will most likely be, using McGovern’s (2000, 527) term, “maladapted to host sites.” In other words, knowledge of one culture
cannot be represented in other knowledge tradition, as they are incompatible. However, the totalizing and homegenizing power of the global structure of multilateral organizations and nation-states suppresses the expression of diversity including the implementation of knowledge systems.

In her seminal article, Peluso (1995, 400), who introduces the ‘politics of mapping’ as a means to understand this movement, suggests that counter-mapping as a tactical issue, in which Indonesian NGOs introduced mapping as 'the language of the state’ to local communities so that the latter can use it to “legitimize their claims to land and resources.” However, as Kosek (1998, 5) indicates, counter-mapping is more than that, because it is “new place-based social movements, in which struggles over the definition, representation and meaning of place will ultimately condition who will and will not have access to and control over resources and people”. Furthermore, indigenous people have to mobilize themselves and accumulate resources (financial and knowledge) in order to challenge the state’s territorial claims. It is a type of indigenous movement, but it uses a particular approach within the larger movements.

Cartography – of which modern maps are the products – is a form of technology with its baggage of values and practices, not a mere tool. Therefore, it is crucial for the proponents of counter-mapping to critically understand both the empowering and disempowering effects of mapping, because the adoption of cartography to produce the ‘language’ of the state requires the organizations within the counter-mapping movement to submit to the practices, and thus values, of cartography, the very technology that have spatially, both physically and through the application of modern knowledge, dispossessed the people for whom they are working. This is the counter-mapping dilemma that Roth (2009, 208) identifies: “Not mapping means that rural communities continue to get mapped by others, potentially losing control over their lands, but mapping means having an impact on the functioning of rural communities, perhaps changing their land management practices.”

To investigate the interaction between outside organizations which provide assistance in mapmaking and the communities, as well as the interactions between cartography and local knowledge is essential to understanding this dilemma. However, to
date counter-mapping has mostly been studied at the organizational level (Fox et al. 2005; Peluso 1995; Sieber 2000) which makes it difficult to assess the interactions between knowledge systems. A focus on individuals as human agents might be more fruitful as knowledge creation starts with individuals who compete and or negotiate to create their collective knowledge (Latour 1987; Pickering 1995). Now I want to discuss briefly the concept of human agency.

The concept of human agency appeared when social sciences were considered to have a dehumanizing face with its strong leaning towards quantitative methods. In geography the interest grew with the rise of humanistic geography that questioned the ‘neo-positivist’ approach of the quantitative revolution, with its strong attempt of quantifying every geographic phenomenon, in the 1960s. The sound humanist flavor in the new approach leads to the treatment of human beings as subjects by “bringing human beings in all of their complexity to the centre stage of human geography” (Cloke, Philo, & Sadler 1991, 58, italics in original). In understanding what the concept means, most of social scientists adopts the theorization of Giddens (1984, chapter 1) on human agency in his theory of structuration which implies the Self who takes intentional action. Ahearn (2001, 112) puts it in another phrase: human agents are those who have “the socioculturally mediated capacity to act.” Therefore, human being as an agency is an active subject who can decide what he or she wants to do. However, individuals cannot work alone as they are part of a culture. This cultural entity – be it a group, a community or a society – has values, practices, and “language,” which create structures within which individuals operate as well as giving them a distinctive identity. Therefore, although a person is an independent being, he or she is a part of a group. This is what leads James Gee to introduce a concept of Discourse.

1.6.3. (d/D)iscourse

Gee (1989a; 1996; 1999) re-formulates Foucalt’s (1972) concept of discourse which emphasizes the set of values and practices within which scientists work. Gee differentiates discourse and Discourse. To him discourse is more limited than Discourse as the former means "connected stretches of language which hang together so as to make
sense to some community of people” (Gee 1996, 90). Discourse, on the hand, is "a sort of identity kit which comes complete with the appropriate costumes and instructions on how to act, talk, and often write, so as to take on a particular social role that others will recognize" (Gee 1996, 127). Therefore, Discourse is more than language, as it refers to the coordination between language with “the ways acting, interacting, valuing, believing, feeling, and with bodies, clothes, non-linguistic symbols, objects, tools, technologies, times and places” (Gee 1999, 25). In other words, it is a set of values, practices, attributes, and performance that signify someone to belong to a particular group. Gregory’s (2001, 86) definition probably close to this understanding: “a specific, collective series of representations, practices, and performances through which meanings give the world its particular shapes - their forms and norms.” One should keep in mind, however, that someone can have different identities and, thus, a number of Discourses that operate in different contexts and encounters.

Each Discourse has a distinctive social language: a language that is used, shared and understood within a certain group. Such language is “what we learn and what we speak” or “who-doing-whats” (Gee 1999, 25, italics in original). It is an important component of an identity. Someone who is not a member of or familiar with a given Discourse cannot understand the meaning of the language in the Discourse, even though he/she can read it.

Gee's (1989a) looks at how the ‘trajectories’ of Discourses affect the production of knowledge by individual actors. A given individual lives with a primary Discourse that he/she adopts from the immediate group they are born into, while other Discourses along his/her trajectory are secondary Discourses. How the actors frame and reframe the Discourses in their trajectories can enlighten the ways in which science and indigenous knowledge systems interact. This idea is highly applicable to counter-mapping to illuminate my intention in looking at the politics of knowledge production in the mapmaking processes. The interaction of these competing Discourses can lead to a new Discourse. The question is whether the struggle is in the form of negotiation/dialogue between different Discourses or imposition of one Discourse onto others.
To further illuminate this, Gee uses the concept of literacy. Literacy is generally understood as the ability to read and write. However, today the term has widely used to refer to one’s ability to comprehend and utilize technologies. If we consider that letters are also forms of technologies, this new definition can apply. Nonetheless, such broadened understanding is still problematic. In a recent report, UNESCO argues that literacy “is about knowledge - its creation, storage, retrieval, transmission and use - knowledge from the local environment and knowledge from elsewhere” (UNESCO 2003, 21). This quote implies that literacy involves not only the production and reproduction of knowledge within a certain group, but also the engagement among different knowledges. The report also acknowledges that literacy is intertwined with identity.

1.7. Research Questions

In this dissertation I am trying to provide a description of cultural interactions within counter-mapping exercises with an emphasis on the contestation of knowledge systems in producing maps in the exercises (hereinafter called as counter-maps). In doing so, I use the ideas of critical cartography (see section 1. Though it implies a liberating notion of mapping, the prevailing contestations of values and practices within mapping remain in counter-mapping. I combine critical cartography and postcolonial science and technology studies to assess it.

This dissertation grew from the findings of a previous study on the impacts of counter-mapping to the indigenous territoriality in West Kalimantan (Pramono 2001). It further examines the relationship between the NGO activists and local communities and between members of the community in making the counter-maps. I have several main research questions. What are the ‘trajectories’ (using Gee’s concept) of NGO activists who are involved in counter-mapping movement? How do their trajectories affect the mapmaking practices? How does an indigenous community make and use their space? How does the mapping affect the community? The research took place in West Kalimantan where the most extensive counter-mapping practices occurred in Indonesia.
1.8. Field Experience and Methods

I carried out this research with in an interrupted fashion from late 2003 to the end of 2008 as I could only secure limited funds to carry out the fieldworks. I came back to Indonesia in late 2003. While finding a research grant to support this research, I did a study on the institutional impacts of counter-mapping to NGOs which was a part of National Science Foundation-funded research project on Spatial Information Technology and Society (Pramono 2005). This project was to assess the ethical, social and institutional impacts of counter-mapping program to NGOs and communities. Apart from my part, the project invited a number of organizations to carry out self-assessments of their respective programs. Eight organizations from Southeast Asia and the United States agreed to take part in this project, of which the Pemberdayaan Pengelolaan Sumber Daya Alam Kerakyatan (PPSDAK) Pancur Kasih was one. A staff member of PPSDAK participated in preparatory workshop of the project that took place in May 2003 in Chiang Mai, Thailand. Since then he actively promoted among his colleagues the need of reflecting on his organization’s program.

Being an organization with the strongest counter-mapping program in Indonesia, I asked PPSDAK to be a respondent of my study in the SIT and Society project. I came to Pontianak in January 2004 for this purpose to interview the staff of the organization. During my visit I also discussed my dissertation research to them who gave a positive response, possibly due to their acquaintance with me from my previous study on their program (Pramono 2001). However, this plan was on hold for about a year as I had to finish the study for SIT and Society project and to seek funding for the field study.

While waiting for a research grant, in several occasions in 2004 and 2005 I discussed the importance of doing assessment on Indonesia’s counter-mapping movement with Restu Achmaliadi, the former executive secretary of the Jaringan Kerja Pemetaan Partisipatif (JKPP –Indonesian Community Mapping Network), and his predecessor, Ita Natalia. The latter, whose term of office ended in early 2007 and who was also a coordinator of PPSDDAK for the period of 1998-1999, attended the Chiang Mai workshop. She showed a great interest in having assessment on the impacts of the movement at the local up to the national levels. She thought the moment was right as
both PPSDAK and JKPP approached its tenth anniversary consecutively. She then asked me to assist JKPP and PPSDAK in their joint project to influence the drafting of spatial plan for the kabupaten\textsuperscript{11} of Sanggau in 2004, as a means of scaling up the impacts of the movement. The project could not achieve its goal as the local government and local parliament issued a revised spatial plan without incorporating the ideas raised in two meetings that the former’s planning office jointly organized with JKPP and PPSDAK. The ‘failure’ in this policy intervention drove both organizations to develop a new venture. During my visits for both meetings and throughout the process of proposal development I discussed in what ways my research could benefit the organizations. This process slowly shaped into a collaborative work in 2005.

The milestone of this collaboration took place in summer 2005. In mid August of that year PPSDAK organized a workshop to reflect what it had done throughout its ten years of existence. The staff member who came to the Chiang Mai workshop was the main drive of this event. The workshop was crucial to both the organization and my own research. PPSDAK began to redefine its strategy and practices, while started embracing a reflection mode, a condition that was critical for my research. The participants of the workshop even asked me to write a summary of the discussions, a role that I was very happy to take as I could learn the issues had been raised in the discussions. It just happened that a few weeks before this meeting I secured funding for my research.

After the workshop JKPP and PPSDAK agreed to develop another collaborative activity in the newly formed kabupaten of Sekadau. I also actively involved in the proposal development of the project. This project was originally aimed at providing inputs to the spatial planning processes of the kabupaten, from the drafting of the plan up to its enactment into a regional law. However, the planned intervention did not take place as the local parliament agreed to adopt the plan before JKPP and PPSDAK could secure funding for the project. They then decided to work on spatial planning at the kecamatan level, i.e., in kecamatan of Nanga Mahap, the southernmost kecamatan in the kabupaten. PPSDAK had mapped several desas in the kecamatan and assisted its camat\textsuperscript{12} to produce

\footnote{\textsuperscript{11} Equivalent to county in the United States.}
\footnote{\textsuperscript{12} Camat is the head of kecamatan}

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a spatial plan for the capital town of Nanga Mahap. At the time of my research, since 2003 three camats had been stationed there and all of them were supportive to the mapping activities of PPSDAK. These favorable conditions were the reasons to scale up counter-mapping activities, which had previously focused too much on the desa level. With such decision I also chose the kecamatan as my study area so that the collaborative effort I had built so far could continue. I also expected that this project could provide additional financial support to my field work. Unfortunately, the project did not obtain funding until summer 2006 which delayed my works in the kecamatan.

Nonetheless, I was able to organize two workshops with the activists of Pancur Kasih. In both workshops I acted as both facilitator and note taker. The first was on the concepts behind counter-mapping movement in West Kalimantan. In this three-day discussion the participants were not only from Pancur Kasih, but also from several other NGOs that had counter-mapping program. PPSDAK hosted the discussion on 9-11 March 2006 and provided logistical supports during discussions. At the beginning of the discussion I asked participants to explain how and why the organizations they were representing involved in counter-mapping. Then I distributed index cards to each participant and asked them to write down how they understood counter-mapping. From the index cards we then selected keywords to be discussed for the rest of the sessions. We decided to pick 13 keywords: map, mapping, participation, map as a means of resistance, territorial tenure and ownership, boundary, conscientization and critical learning, indigenous knowledge/wisdom, documentation, community, conflict resolution, natural resources, and spatial plan. For the next two and a half days we discussed their understanding on each keyword.

The second workshop was on 17-18 January 2007 with a topic on the mapping methods that PPSDAK had employed for the last ten years. Participants of the two-day discussion were the staff members of the organization. We discussed the mapping methodology that had been the standard practice of the organization. The discussions included how and why a step of the mapping exercise was adopted, how it was implemented, and what were its impacts so far. In addition to the discussion with the activist, I also interviewed the founding coordinator of PPSDAK who had a crucial role
in developing the philosophy and methodology of counter-mapping within the organization. Later I found out that the main thinker of the methodology was an activist who took part in the first counter-mapping exercise in Indonesia. He had previously been a staff member of Worldwide Fund for Nature Indonesia (WWF Indonesia) at its Kayang Mentarang Project in East Kalimantan who was carrying a research for his master thesis comparing community-initiated mapping exercises and German-funded community mapping exercises in West Kalimantan.

On the conclusion of the second workshop with the activists, I asked them where I could carry out a field research. Prior to this visit I thought of doing the study with Mualang people who live north of the Kapuas River. The reason was that a Catholic priest produced a number of publications on this group which I thought would help me in understanding them (Dunselman 1955, 1959). PPSDAK had mapped several kampungs of the people. They provided me with other alternatives including the desa of Sebabas in the kecamatan of Nanga Mahap. They showed me a map of the desa and caught my attention right away, because it has a kampung separated from the rest of the territory. In addition to my commitment with JKPP, I decided to choose the desa as a study area. I then learned that an indigenous group who live in the desa and along Mahap river namely suku Maap or Maap people, which known as Mahap to outsiders, would hold musyawarah adat (assembly meeting) at the end of January 2007. The newly elected temenggung – the chief of the suku – came to PPSDAK’s office to discuss the meeting. I asked him for a permission to attend the meeting, which he gave. I came to the meeting with three PPSDAK’s activists. I observed the discussions during the meeting, which took place in the rumah adat in the kampung of Sebabas. At the end of the meeting an activist who was the facilitator of the meeting introduced me officially and gave me some time to explain my plan. After introducing myself, I explained my plan to carry out a research in order to understand what happened during the counter-mapping exercise in their desa and how they perceived their surroundings. I picked up a topic of their discussion on the need of transferring knowledge of the people to young generation, to

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13 Rumah adat is a meeting hall which replaces the function of common area of longhouse, which had been demolished with the coming of Christianity and modernization.
which my research might offer. The participants of the meeting, particularly the males, expressed their consent.

I came back to Nanga Mahap in March 2007 when PPSDAK had planning sessions in three desas, one in which they conducted mapping exercise. That was the first time I could observe how PPSDAK conducted mapping. At the end of this trip I went to Pait, a kampung of desa Sebabas, to discuss my research plan for the rest of the year with the temenggung who lives in the kampung. I attended the Sunday service in the kampung and again explained my plan to the residents of kampung who mostly did not attend the musyawarah adat earlier that year.

In April 2007 I came again to observe mapping and planning sessions in two desas. The next two months I stayed in a kampung in the desa of Sebabas. In the village I acted largely as a participant observer with some in-depth interviews and focused group
discussions (Goss & Leinbach 1996; Irwanto 2006; Morgan 1997; Schensul et al. 1999; Spradley 1979). After discussing and interviewing people in the kampung I realized that I had to focus my research on the kampung to understand how their spatial knowledge played and how it interplayed with cartographic knowledge, instead of doing research in all six kampungs I previously planned.

During my first stay in the kampung in May and June 2007 I participated in many community activities. The first night I was asked to attend a gawai\textsuperscript{14} for child adoption. The next day I joined them to go to a neighboring kampung which invited the community of Pait in order to build a sense of kinship between both kampungs. Coming back from this trip I stayed at the temenggung’s house. His house was on the upstream part of the kampung. The house was big to the kampung’s standard. It had four bedrooms, a large living room, a smaller living with television set and video compact disc player, a small store, a kitchen with LPG stove, and a bathroom. The temenggung’s father was a head of the kampung in the 1960s and 1970s.

I had discussions and interviews in the evenings, as most people engaged in farming and other activities for their livelihoods or going to Nanga Mahap or Sebabas to buy goods, to do official business at the government offices or cooperatives during the day. I had discussions with different groups: the elites, women, youth, and the representatives for mapping. However, most of my discussions were with the governing group, all male, in the kampung including dusun head, former dusun head, mantri adat, acting desa head. With interrupted research process and relatively short visits due to limited funds, it was difficult to really engage with other groups. Therefore, I depended much on the advice of temenggung in finding the potential interviewees and organized group discussions. This is of course a weakness of this research. I did try to reduce the bias as much as possible by having group discussions with women and youth. I had a separate discussion with women at the house of interim kepala desa (head of desa) after they had a PKK meeting.\textsuperscript{15} In other times I chatted with the villagers, particularly women,

\textsuperscript{14}Gawai is a general term of adat ceremony with a characteristic of rituals around jars of rice wine and its consumption following complex rules and practice that implicitly confirm the importance of social stratification and gender division. The rules and practice need a completely separate research to understand.

\textsuperscript{15}PKK is an abbreviation of Pembinaan Kesejahteraan Keluarga (Support on Family Welfare) that becomes the realm of women. The chair of this group is usually the wife of kepala desa. Because of this
in front of warungs (small shops) as they gathered. Meanwhile, with youth, mostly men, I discussed the issues informally when they gathered in somebody’s house.

In December 2007 I came again to the kampung to discuss two topics: the spatial terms known among Maap people and contents of the map of their kampung. I held three group discussions, each with adult male, women and youth to discuss both topics at the same. For the purpose topic I borrowed the map of the kampung from the former dusun head who kept the maps. I asked the temenggung to invite a few males to discuss for the adult male group. For the women I asked the wife of the temenggung to gather a number of women, whereas for the youth a son of mantri adat invited a number of teenage boys and girls on my behalf. I had separate discussions for these groups.

After an interval of a few months, I visited West Kalimantan twice in 2008 for this research, both were with PPSDAK. The first was in May 2008 when I had a consultancy work and learnt that PPSDAK would hold a strategic planning. I asked the permission from the organization to join which was granted to me immediately. The second was in November 2008 when I was asked to facilitate a workshop to evaluation the mapping methodology adopted by the organization.

In most discussions I used tape recorder to record the conversations. However, I also used the minutes of the meetings in the events officially organized by PPSDAK. In addition, when I had the access to the organization’s archives I made photocopies of the documents relevant to my research. In analyzing the interviews, discussions and archives, I use discourse analysis as described by Gee (1999).

In doing the analysis I searched the situated meanings and cultural models of the spoken and written words, two concepts that Gee (1999) introduces as a tool of inquiry. In conversations we frequently find words that we only understand if we know the context of speech. In a sentence such as “I don’t have shoes to join” does not mean that the speaker does not have shoes at all. But it may refer to the appropriate shoes for the occasion the person is going to attend. This is the situated meaning: “an image or pattern that we assemble ‘on the spot’ as we communicate in a given context, based on our

kind of arrangement during New Order era the group practically became an arm of the state in controlling the lives of women.
construal of that context an on our past experiences” (Gee 1999, 80). Cultural models are “‘storylines,’ families of connected images (like a mental movie), or (informal) ‘theories’ shared by people belong to specific social or cultural groups” (Gee 1999, 81). In a latter edition of the book, Gee (2011, 205) uses a new term figured world with a clearer definition which means “a theory, story, model, or image of a simplified world that captures what is taken to be typical or normal about people, practices (activities), things, or interactions.” Here the meaning of a word relates to the identity of the person involved. The word has a certain connotation or involves certain prototypes of the group in the speech.

1.9. Outline of Dissertation

In this chapter I argue the importance of individuals or human agency within knowledge systems and in knowledge encounters. I review the treatments of the encounters in social sciences and history of science and technology with an emphasis on the role of human agency in the development of knowledge systems, particularly on modern Western science and technology. Then I review the existing literature on counter-mapping. Toward the end of the chapter I describe my research (its objectives, methodology, and reflections on the research).

In Chapter 2 I attempt to conceptualize counter-mapping through the perspective of human agency by treating it as a form of cartographic encounters where a geographic translation take place and participatory approaches are employed. To do so I borrow the ideas from postcolonial STS, translation studies, and literacy studies. It first reviews the concept of cartographic encounter. I will then elaborate the encounter through the concepts of spatial literacies (adopting ideas from literacy studies) and geographic translation (Belyea 1992). The former is a means to emphasize the existence of diverse spatial knowledges, while the latter is to reveal the centrality of human agency in mapping endeavors. In doing so, I take particular attention on the contestations within knowledge production. I then venture into the participatory approaches focusing on the thoughts of Paulo Freire as a main difference with the conventional mapping. Finally, I lay out a proposal of the philosophy of counter-mapping.
I discuss the history of the counter-mapping movement in Indonesia in Chapter 3, particularly by looking at its Discourses and methods. I first explore the histories of social movements that made the way to and were very much influenced the development of counter-mapping movement in Indonesia, especially environmental, indigenous and agrarian movements. In so doing I discuss the socio-political contexts throughout the years as well as the main paradigm/Discourse adopted. Then I review the history of counter-mapping in Indonesia by describing the events and individuals/institutions involved. Finally, I discuss how the proponents of counter-mapping movement in Indonesia perceive and theorize the movement.

I discuss the first part of the section on the findings from my field research in Chapter 4. The chapter starts with the discussion on transformation process of Dayak peoples, with an emphasis on the history of dispossession, in West Kalimantan and how they reacted to the process using an example of Dayak Maap people. The chapter moves to the discussion on the history and Discourses that Pancur Kasih, an important Dayak organization in West Kalimantan, adopts to resist and counter the marginalization trend. Next is the establishment of PPSDAK Pancur Kasih, the mapping arm of Pancur Kasih, and how the organization institutionalized the concepts and created activists-cum-surveyors (mapping facilitators).

Chapter 5 discusses how the cartographic encounters work in reality. I start with how activists understand counter-mapping and how the understanding shapes the methodologies. It deals with their understandings on the concepts related to cartography/mapping and empowerment. It explores the working questions in my proposal as follows:

• How do the NGO activists understand cartography? To what extent do they know about the values and practices within cartography?
• How do they perceive the application of cartographic techniques in terms of liberation and empowerment in their counter-mapping program?
• How do they understand ‘dialogue’ as a part of their participatory methods?

I then discuss the mapping methodology of PPSDAK Pancur Kasih and the conceptual ideas behind each step of the methodology. With these concepts and methodology in
mind I discuss I describe in retrospect a mapping exercise in a kampung in the subdistrict of Nanga Mahap that took place a few years back and an exercise that I observed directly. I give special reference to the spatial knowledge of Maap people as an example of indigenous knowledge in the area. Next is the story of mapping in action. I describe both past mapping exercise in the kampung I studied and the actual mapping I observed during the research. To do so I describe the actual activities that took place in each step of the mapping methodology in order to show how the knowledge encounters occurred. I search dialogical process as Freirean thought demands.

In the concluding chapter I reflect the interactions between two groups of human agency in counter-mapping within the framework of cartographic encounter on how they produce knowledge separately and together and how their knowledges affect each other. Through this process I can come up with an assessment whether or not dialogue occurs in counter-mapping and, if its does, to what extent.
CHAPTER 2
CONCEPTUALIZING COUNTER-MAPPING

2.1 Introduction

In the previous chapter I outlined how counter-mapping is both a social movement and a method. As such it involves two fundamental issues. As a social movement it is a form of resistance to the dominant discourses. It tries to put forward its own narratives, those of the dispossessed and marginalized, very apparent in the content of the maps. Counter-mappers want to show outsiders their understanding of their landscapes/seascapes. This involves encounters between between cartography and other knowledge traditions in regards to the collection and production of spatial information, under the general rubric of cartographic encounters (Lewis 1998f). As a method counter-mapping has two components, which are somewhat contradictory. The first component is, as the proponents of the counter-mapping in Indonesia noted from the beginning (see Sirait & Moniaga, n.d.), the translation of mental maps into maps of cartographic standards.\(^\text{16}\) This is a form of ‘geographic translation’ (Belyea 1992) in action. The second component is the application of participatory principles, in which the production of maps is based upon the needs and interests of local communities. This approach is quite different from other modern mapping methods that treat local communities as mere information sources, without much consideration on how the communities can benefit from the mapping. I explain the contradiction of these two components later in this chapter.

In this chapter I argue that counter-mapping is a form of cartographic encounters by emphasizing on the roles of human agency, particularly surveyors and local people (including indigenous people). This approach is still relatively new, so to my knowledge no review is available on this subject. To start with I review the available literature on cartographic encounters, particularly Lewis’s (1998f) edited book on the interaction between modern mapping and indigenous mapping in North America that introduces and sets the concept. I also review other publications on the

\(^{16}\)One of the authors learned the term when he was participating at a writing workshop on counter-mapping leading to the publication of Sirait et al. (1994). The idea of mental map is a central concept in cognitive mapping. Gould and White (1974) explicitly use the term. Using the term cognitive map, Down and Stea (1977, 4) refers it to “a person’s organized representation of some part of the spatial environment.”
subject and look at the examples outside the sub-continent. I will then examine the encounter through the concepts of spatial literacies (adopting ideas from literacy studies) and geographic translation (Belyea 1992). The former is a means to emphasize the existence of diverse spatial knowledges, while the latter is to reveal the centrality of human agency in mapping endeavors. In doing so, I will take particular attention on the cultural politics within knowledge production – the contestation of values and practices within mapmaking. Such theorizing is intended to apply to both (post)colonial state mapping projects and counter-mapping exercises. In discussing these encounters I also borrow the ideas of postcolonial Science and Technology Studies (STS) to show in particular the hegemony of Western cartography over other spatial knowledges. After that I will explore participatory approaches by looking at its history and the concepts that come with it. I will emphasize on the thoughts of Paulo Freire on the participatory methodologies. Freire argues that in knowledge production everyone is a ‘knowing subject,’ who learns from each other in understanding the world. Such understanding allows the equal position of the participants of a knowledge production activity.

2.2. Literature Review on Cartographic Encounters

In assessing cartographic encounters in the Americas, Lewis (1998a) identifies three phases. The first, between 1511 and 1925 involved direct field encounters in which Europeans solicited Native Americans to draw maps. Lewis claims Native Americans were willing to share all “geographical information about the world beyond that already experienced by the whites” (1998b, 2). Such maps were intended “as messages or instructions to others; as interactive planning; in order to reconstruct past events and record them for posterity; to make sense of the world beyond that of direct experience and relate it to the known world; and to divine” (Lewis 1998a, 11). However, maps drawn by Native Americans in 16th and 17th centuries rarely survived or were incorporated into European maps or transcripts. During this phase there was a shift from indigenous maps, including stick maps made by the Native American, to cartographic or

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17 This review relies heavily on Lewis' edited book (1998a) since it is probably the only one with excellent review on the subject.
at least graphic forms that became quite apparent in 19th century when European
influences were very strong. Such maps have been studied through the eyes of white
scientists, sometimes also by “white-educated or –trained indigenous specialists” (Lewis,
1998a, 9).

The second phase, overlapping with the first, was between 1782 and 1911. It was
characterized by incorporation and assimilation, particularly by mapmakers working in
central bureaus or colonial offices and, from 18th century onward (Lewis 1998c, 34).
However, it is hard to find examples of “fully acknowledged incorporation” of
indigenous maps into the European maps, although one can sense “subtle but
unacknowledged assimilations” (Lewis 1998c, 33-34). This phase was also marked by
the study of indigenous maps as objects of academic study. Pioneered by
Post-Enlightenment scholars in Germany especially after the creation of the German
Empire in 1871, it recognized and studied the maps of native peoples as “a distinctive
category of cartography” (Lewis 1998c, 34). The development of “a new global,
systematic, and evolutionary-based human geography” (Lewis 1998c, 35) after the
publication of Ratzel’s Anthropogeographie much influenced the development of
academic cartography in Germany. In North America many maps were drawn on paper
and were collected and preserved especially between the end of the American Civil War
and the outbreak of WW I and contributed to the Othering of Native Americans (Lewis,
1998c, 33)

The third phase began in 1970 after a long period of hiatus (Lewis 1998d). This
also coincided with a ‘paradigm shift’ in social science when Marxist influences and
postmodernism came to the fore, including in geography (see Johnston 1997; Peet 1977;
Soja 1989). In this phase historians of cartography and other scholars began to realize
that native maps were culturally embedded (Lewis 1998d) and that they involved
different worldviews and practices. Such worldviews are similar to those existing in
Europe before the Renaissance. Lewis notes that the main obstacle in this ‘renewed
encounter’ is how to place native maps within the prevailing concept of map that requires
spatial representation on flat surface and the use of scale or projection (1998d: 63).
However, by the end of 20th century the scholars began to recognize the diversity of
epistemologies, methodologies and concepts of map (Lewis 1998e). Lewis believes that “[b]y placing maps and mapmaking in the encounter process,” the coexistence of “native and white thought-worlds” can be exposed, while shifting “the center of gravity of native-map studies away from the gross but innocent Euro-American centrism of an earlier era” to “a new centrism in more recent times” (Lewis 1998b, 3). This opens up a new understanding of what is involved in cartographic encounters.

Renewed encounters are now thriving. Blakemore (1981) was among the first to provide an overview of this work, but more recently there have been numerous studies of the colonial period. Lewis’ edited book (1998f) has seven chapters, one on Mexico and the rest on the United States. Mundy (1996) also writes on New Spain (now Mexico). One of the limited accounts on the encounters outside the region is that of Winichakul (1994) on Thailand. The publications on the encounters in a post-colonial context are more limited. Again they are mostly in the Americas. Brody (1981) and Sterrit et al. (1998) describe the interactions during territorial negotiations in Canada between First Nations and the government and among themselves. Orlove (1991; 1993) discusses how the maps of local communities and national park office compete in making claims in Lake Titicaca (Peru).

Despite of the placing of ‘ethno-cartography’ as a “minor piece of exotica” (Turnbull 1998, 21) within the history of cartography, the tendency to use scientific knowledge to validate indigenous knowledge still prevails. Blakemore’s (1981) pioneering article champions cartographic knowledge as a more advanced form of knowledge. Lewis’ position on the indigenous spatial knowledge raises questions and shows his ambivalence as well. He prefers graphic map representation and while emphasizing the importance of acculturation in mapmaking (1998f, 3). He also believes that the native persons had “the ability to communicate by means of maps”(Lewis 1998b, 2), but tends to disregard native ‘maps’ that did not use map equivalent vocabulary. This is quite obvious in his judgment of one native map: “The whole [of Wingenund’s bark painting recorded in 1782] is certainly not a map [particularly due to the absence of
written words and toponym] but, like many pictographic messages, some of the components are recognizably cartographic” (Lewis 1998a, 12).

Turnbull (1998, 19) proposes another approach to cartographic encounters. He argues that discussions about cartographic encounters should “focus on practice, process, and performance, rather than on representation, accuracy, and measurement”. He also notes that through such encounters permit “sites of resistance are created making mapping back, remapping and antimapping possible” (Turnbull 1998, 20). Following these arguments I propose to approach cartographic encounters through the concepts of spatial literacy and geographic translation which enable us to reveal the practice, process and performance within the encounters.

2.3. Spatial Literacy
2.3.1. Understandings of Literacy

Writing of the socio-cultural aspects of literacy, Street (1984, 1) proposes to treat it as “shorthand for the social practices and conceptions of reading and writing.” He coins the term New Literacy Studies (Street 1993) to describe his approach and lays out two models of literacy (Street 1984). The first he calls the autonomous model, which treats literacy (particularly in Latin characters) as a universal, superior and necessary skill for a modern person to function in a society and to be a good citizen. This model treats literacy as a cognitive process as it assumes “a single direction in which literacy development can be traced, and associates with ‘progress’, ‘civilization’, individual liberty and social mobility” (Street 1984, 2). After assessing Street’s thoughts, Auerbach (1992, 73) notes four myths of the model: it considers literacy unitary and universal; that literacy is essential to “higher order cognitive processing;” that it is a road to economic advancement; and it claims ideological neutrality.

Jack Goody (Goody & Watt 1963) is the most important promoter of this approach. His co-authored seminal work identifies the basic differences between non-literate societies and alphabetic literate societies based on the cultural and social conditions of both types of societies. Collins (1995, 77) provides a good summary of the
article as having “(a) a distinction between myth and history, (b) a distinction between opinion and truth (formalizable inquiry or logic), and (c) a distinction between acceptance of received tradition and a skepticism about tradition, which leads to individuation and democratic social forms”. This approach also creates a ‘great divide’ between orality and literacy.

This approach also emphasizes the concept of functional literacy that focuses on the “basic skills of reading, writing and arithmetic used to accomplish the tasks of daily living,” which not only entails “the possession of skills and knowledge, but also on how they are applied within the local environment of the user” (Walter 1999, 32). This concept is widely promoted in educational policies around the world, especially for poor communities. UNESCO is the main sponsor. By advocating a single concept of literacy, this approach promotes a single meaning of literacy. The consequences are quite political as such literacy (re)produces a certain type of culture. Nonetheless, the approach treats literacy as apolitical matter, ignoring the very political act it promotes.

It is this that leads ethnographers to focus on the power relations and cultural settings in which literacy exist. Street (1984, 2) calls this as ideological model that “stresses the significance of socialisation process in the construction of meaning of literacy.” This approach has a set of characteristics: it is embedded in social institutions; it has political and ideological significance; it depends on aspects of social structure, constructs meaning through learning processes; and it adopts not single ‘literacy’ but ‘literacies.’ In other words, the model considers literacy as a socio-cultural construct and treats it inseparable from the social, political, and historical forces which shape it (Street 1984). Gee (1992) calls this a socio-cultural approaches to literacy involving identity formation to the discussion. This approach recognizes that literacy acquisition does not always require formal schooling, but it is “a function of society-specific tasks” (Heath 1980, 126).

The multiplicity of literacies does not only exist in society as a whole, but also in smaller scale, within a community. They are “embedded in social and cultural contexts … [They] are part of contests over power and resources – and over the meanings” (Street 1995, 82). Meanings and social practices exist within certain discursive practices. For
Lankshear and McLaren (1993) this means that literacies are also forms of discursive practices. By placing literacies in the context of a society, researchers can understand how the society “organize[s] ways of thinking into ways of doing and being” (Lankshear & McLaren 1993, 10). This approach also adopts the liberating nature of literacy as introduced by a Brazilian philosopher and educator, Paulo Freire (Freire 1985; Freire & Macedo 1987; Freire 1993).

Freire believes that through literacy campaigns the oppressed can gain new understandings about an unjust world and take action to pursue true democratic society (Freire 1993). Freire’s critical literacy emphasizes the political nature of literacy by encouraging the communities to “[question] social practices and arrangements or the values sought by ruling interests” (Lankshear & McLaren 1993). The method is to read a word and its connotations according to the learners. As the campaign is primarily for the oppressed (marginalized, vulnerable groups), the learners relate the words to their oppression. Therefore, by being literate a person understands the power relations that affect his/her life. Or, using his own words, ‘reading the words is reading the world.’

This approach is not free from weaknesses, however. Auerbach (1992, 78-79) warns that the focus on context-specificity, learner-centered process and politicized content can lead to a new functionalism, promotion of individualism and new kind of disillusioned idealism.

2.3.2 Theories of Spatial Literacy

A recently published report of the US National Research Council’s Committee on Learning to Think Spatially (National Research Council 2006, 18) describes “spatial literacy” as a person’s proficiency in “spatial knowledge, spatial ways of thinking and acting, and spatial capabilities.” The report emphasizes three elements within the term, i.e., concepts of space, tools of representation, and processes of reasoning. NRC (2006, 25) explains the nature of these three components:

- Space provides the conceptual and analytical framework within which data can be integrated, related, and structured into a whole.
- Representations—either internal and cognitive or external and graphic, linguistic, physical, and so forth—provide the forms within which
structured information can be stored, analyzed, comprehended, and communicated to others. Reasoning processes provide the means of manipulating, interpreting, and explaining the structured information.”

Using the idea of this report, Johnson (2008, 422) defines spatial literacy as “the ability to understand the concept of space; apply processes of reasoning employing appropriate tools to determine spatial relationship between people, places, or objects; and visualize or communicate those spatial relationships in various contexts.” Spatially literate persons should then (quoting NRC 2006, 20):

• have developed appropriate levels of spatial knowledge and skills in spatial ways of thinking and acting, together with sets of spatial capabilities,
• have the habit of mind of thinking spatially—they know where, when, how, and why to think spatially;
• practice spatial thinking in an informed way—they have a broad and deep knowledge of spatial concepts and spatial representations, a command over spatial reasoning using a variety of spatial ways of thinking and acting, have well-developed spatial capabilities for using supporting tools and technologies; and
• adopt a critical stance to spatial thinking—they can evaluate the quality of spatial data based on their source, likely accuracy, and reliability; they can use spatial data to construct, articulate, and defend a line of reasoning or point of view in solving problems and answering questions; and they can evaluate the validity of arguments based on spatial information.

In short, spatial literacy refers to how “people draw upon their spatial knowledge, their repertoire of spatial ways of thinking and acting, and their spatial capabilities to solve problems in all aspects of their lives” (National Research Council 2001, 49). This approach embraces abstraction as much as lived experience. Such concept of spatial literacy is most likely derived from cognitive mapping in behavioral geography, which is “an abstraction covering those cognitive or mental abilities that enable us to collect, organize, store, recall, and manipulate information about the spatial environment” (Downs & Stea 1977, 6).

Although it acknowledges the existence of other traditions of spatial knowledge, the committee prefers to employ (modern) cartographic concepts, particularly the application of GIS, as a means to develop spatial literacy. A spatially literate person will be familiar with (modern) cartographic literacy, while ignoring the other approaches to...
cartographic literacy. Such understanding implies an autonomous model of spatial literacy.

The concept of cartographic literacy has been long known in geography, particularly in geographic education. However, the concept is problematic when employed in the counter-mapping movement, because it uses autonomous model whereas counter-mapping counters the hegemony of mainstream institutions (primarily the state and corporations) imposed by the maps. Moreover, the mapping technologies of cartography involve values and practices, as it is not a mere tool. Therefore, it is crucial for the proponents of counter-mapping to critically understand the discourse of cartography of both its empowering and disempowering effects.

Studies on cartographic literacy put more emphasis on maps as a means of communication, a theme promoted by Arthur Robinson and Barbara Petchenik (1976) in their study of cartographic communication. More recently Rayner (1999) has surveyed the status of cartographic literacy, and concludes that most focus on the cognitive aspects of map reading. She (Rayner, 1999, 4-5) defines map literacy as “the ability to effectively construct meaning from the symbols found on a map, as well as understanding how to use map symbols to create meaning.” Wiegand (1993) argues that map literacy has three purposes: locating places in relations to each other; navigating; and solving problems. This school of thought implies that map literacy develops along with cognitive development and is required for anyone to function well in a modern society. It claims to be apolitical, although cartographic literacy is very political in nature, particularly in term of building the sense of nationalism (Matless 1999).

In counter-mapping cartographic literacy is consciously political. Anyone who is involved in this effort has to be able to read, use and make modern maps and communicate their concerns in the “language” of cartography. In addition, they need to know how the maps are made. In other words, they have to be cartographically literate (Pravda 2000-2001). Being in such condition the dispossessed can obtain social, political and economic understanding about the injustices a map can implicate. They then take action by producing new meanings onto a map in order to transform the existing power relations. They then ‘re-write’ the maps based on their interests. Such understanding is
close to an ideological model of spatial literacy, particularly that of Freirean.

An ideological approach to spatial literacy treats cartographic literacy as a variety of spatial literacy. I separate (modern) cartographic literacy and the varieties of indigenous spatial literacy. This is unfortunate as only the Western tradition is recognized as being scientific. However, non-Western traditions have entered into scholarly consideration recently, especially through the History of Cartography Project initiated by J. Brian Harley and David Woodward.

Western spatial knowledge, which lays the foundation of cartographic literacy, emphasizes vision in making sense of the world. In this tradition viewers are detached from the earth, so that they can objectify it through a bird-eye view. Edney (1997, 48) notes that this “highly visual epistemology” creates “an almost physical distance between the viewer and the viewed, between the subject and the object of the vision. [The viewed is then] pushed away from the viewer into the external world of objects, an action exaggerated by the use of instruments to see and measure the ‘true world.’” The measurements of ‘objects on earth’ are conducted using geometric principles so that the globe can be flattened into a piece of paper to produce scientific maps. It is in fact a mathematization of space (Duncan 1993,41) that turns the world into a space which is “abstract, homogenous, and universal in qualities” (Harvey 1989, 254). This conception becomes the basis for Europeans to reorganize and order space.

The importance of vision in Western culture led to the development of new ways of observing during Enlightenment era. In his historical account on the colonial mapping activities in India, Edney (1997) proposes three types of observation. The first is systematic observation in which vision is employed with (Western) reason to classify the world. The colonial elites believed that reason makes the observation ‘better’ or superior, because “there could be no knowledge without reason” (Edney 1997, 51). If viewers observe without using reason, they “mired in savage ignorance” (Edney 1997, 49). The second type of observation is “the examination and graphic reproduction of landscape views and of the features of the natural landscape” through recording the ‘world as it is’ (the scientific gaze). This involved Western values and meanings of the world. It was
claimed as scientific because the viewers employed “a precise and correct manner” (Edney 1997, 55) through the use of scientific observing instruments such as camera obscura. Finally, landscape observation (the Picturesque gaze) employed a staging method in which that the viewer presented the observer with “a more refined, subtle, and delicate manipulation of nature” (Edney 1997, 57), especially through landscape paintings. The artist meant to evoke an observer’s emotions which became a desire to appropriate the landscape, because the “landscape had become a commodity to be defined, acquired, and consumed by the observer” (Edney 1997, 62). These ways of “gazing” suggest that in modernity place was represented through a process that Casey (2002, xv) calls re-implacement: “the ways in which places are altered and transmuted even as they are reinstated in painting and maps.”

Different kinds of indigenous spatial literacy, on the other hand, do not depend solely on vision. Spatial representation is not only graphic or pictorial in format, but also conveyed in speech, song, dance and other formats. Woodward and Lewis (1998, 3) categorize such spatial representation into three groups, i.e., cognitive cartography, performance cartography and material cartography (Table 2.1.). Many of these forms of representation are usually considered artistic forms in the Western tradition, and thus formerly did not catch geographers’ attention.

Non-Western spatial knowledge traditions put subjectivity into the form because they are more concerned with place rather than space. According to Basso (1996) in his account on Western Apache sense of place “[k]nowledge of places is closely linked to knowledge of the self, to grasping one’s position in the larger scheme of things, including one’s own community, and to securing a confident sense of who one is as a person.” There is also a spiritual realm involved. In their concluding remark on the volume of the history of cartography in Asia, Woodward et al. (1994, 846) suggest that

[the indigenous maps] not only represented the observable world, but also modeled what unseen: the entire cosmos including the realms of spiritual beings, heavens and netherworlds, different realms of existence, and the configurations of invisible natural forces—as, for example, in siting and divination. Mapping was important not only for journeying through geographic space but also for spiritual wayfinding. … The secular was
Table 2.1. Categories of representations of non-Western spatial thought and expression

<table>
<thead>
<tr>
<th>Internal (Inner experience)</th>
<th>External (Processes and objects that realize or externalize the internal experience)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive cartography</td>
<td>Performance cartography</td>
</tr>
<tr>
<td>(Thought, images)</td>
<td>(Performances, processes)</td>
</tr>
<tr>
<td><em>Organized images such as spatial constructs</em></td>
<td>Material cartography</td>
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<td></td>
<td><em>Nonmaterial and ephemeral</em></td>
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<td></td>
<td>Gesture</td>
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Source: Woodward and Lewis (1998, 3)

often also sacred. Political space was often simultaneously spiritual space. Spiritual space often overlapped into architectural space, particularly in temples, tombs, and reliquaries, which themselves were often three-dimensional cosmological models. The distinction between spiritual and physical was rendered invalid.

With such understanding, ‘mental maps’ – which are the memories of the landscapes of the people and the boundaries of their *kampungs* – are actually only spatial knowledge. Meanwhile, the discussion should embrace the ways the indigenous groups make sense of the landscapes. Therefore I prefer to use the term indigenous spatial literacies in this regard.

In mapping new land into which European powers expanded, colonial surveyors and cartographers expanded their own spatial literacy to produce maps which incorporated indigenous spatial knowledge, although they rarely acknowledge this.
2.3.3 Geographic Translation

Translation is generally understood as the process and the product of translating written or spoken expression from one language to another language.\(^{18}\) Hatim and Munday (2004, 6, emphases in original) propose “threefold definition of the ambit of translation”: a. the process of transferring the Source Text to Target Text “in a specific socio-cultural context”; b. the product which “results from that process and which functions in the socio-cultural context of” the Target Language; c. “the cognitive, linguistic, visual, cultural and ideological phenomena which are an integral part of” a and b. A translator is thus at the center of this process, and has to possess the mastery of both Source and Target languages, as well as the cultures of both. A translator thus mediates both cultures and has to be sensitive to them. This leads translators to claim to be a force for good, a creative artist, an interpreter and inter-cultural mediator or even as “a figure whose importance to the continuity and diffusion of culture is immeasurable” (Bassnett 2002). However, for a long time translators considered their act of translating as technical matters that focused on the issues of equivalence of meanings between the words of the Source language and Target language.

However, during the 1990s, issues of power and ideology transformed understandings of translation, particularly those under European colonial settings. As Bassnet and Triverdi (1999, 16) argue, “[t]ranslation has been at the heart of the colonial encounter, and has been used in all kinds of ways to establish and perpetuate the superiority of some cultures over others.” It tended to be “a one-way process, with texts being translated into European languages for European consumption, rather than as part of a reciprocal process of exchange” (Bassnet & Triverdi 1999, 5). The colonial power saw Europe “as the great Original, the starting point, and the colonies were therefore copies, or ‘translations’ of Europe, which they were supposed to duplicate” (Bassnet & Triverdi 1999, 4). With the adoption of such postcolonial thinking the Translation Studies has come to consider translation “a process of negotiation between texts and between

\(^{18}\)Studies on translation issues has developed into a distinct scholar tradition in 1970s and is called Translation Studies (Bassnett, 2002). The Studies calls the original language as source language, while the language of the translated form is known as target language (TL).
cultures, a process during which all kinds of transactions take place mediated by the
figure of the translator” (Bassnett 2002, 6). As Basnett and Triverdi (1999, 6) further
argue, “[t]ranslations are always embedded in cultural and political systems, and in
history.” Such approach sees the act of translation as a means of dominating
colonized/marginalized cultures. The translator’s voice is therefore an expression of
power (Hatim & Munday 2004). Translators create a certain image of subjects through
the words of the Target Language, while at the same time putting their own cultures in a
superior position. The outcome is a process of Othering. As Niranjana (in Hatim &
Munday 2004, 208) argues colonial translators did this by reinforcing a certain image of
the colonized.

We can apply this approach in cartography because a map can be thought of as a
language (Andrews 1990). An act of translation occurs when surveyors and cartographers
transform local spatial knowledge into cartographic maps. Belyea (1992, 270;1998) calls
this as “geographic translation” in which there exists a “communication from one set of
culture-specific measurements to another.” Surveyors, mapmakers and cartographers are
thus the translators who are in the middle position between two spatial knowledge
traditions. Indigenous spatial knowledge is the Source Language, and the cartographic
map is the Target Language. However, as in other forms of translation, in geographic
translation the translators carry cultural baggage that filters the spatial information of
other knowledge traditions through their own set of conventions. The process and the
outcomes of the translation depend on power relations. In this regard the filter is
cartographic conventions that enable the surveyors and mapmakers to find
“[cartographic] equivalent for the map structure and topographical details” (Belyea

In European colonies geographic translation contained strong notions of European
scientific superiority. As Latour (1987, 216) notes based on French colonial surveying
missions, this shifted the nature of knowledge making it alien to the original owners:
“[th]e implicit geography of the natives is made explicit by geographers; the local
knowledge of the savages becomes the universal knowledge of the cartographers; the
fuzzy, approximate and ungrounded beliefs of the locals are turned into a precise, certain and justified knowledge” (emphases in original). Further translation took place at the ‘centers of calculation’ in metropolitan scientific centers (London, Paris, for example), distant from the knowledge owners. These centers through incorporation, acculturation, and assimilation turned indigenous spatial knowledge into cartographic knowledge (Lewis 1998f). The flow of information, although a two-way one, was thus unequal as the latter sets the standards for all knowledge traditions. Cartography thus developed within racial and imperial ideologies (Piper 2002, 180), because “the very object of the map is to destroy and replace local or indigenous knowledge” as the “antithesis of modern knowledge.” This kind of knowledge space in cartographic enterprise is analogous to contact zone’ (Pratt 1992).

2.4. Participatory Approaches

Participatory research originated in adult education circles in the 1970s, particularly in Latin America and Tanzania, as a response to the weaknesses of existing social research of the time in capturing the concerns of marginalized groups (Hall 1975). It evolved into different methodologies and became very popular in development literature and practices from the late 1980s. The most celebrated thinker of this approach is Paulo Freire, whom I discussed earlier in discussing literacy.

Many consider Paulo Freire one of the most important philosophers of the twentieth century. His thoughts affect particularly the grassroots movements and community development, not only in the Third World but also the First World. Deeply influenced by Marxist ideas, indigenous persons may find his thoughts problematic due to his modernist views, despite his promotion of ‘progressive postmodernism’ which “avoids both a naive optimism and a depressing pessimism in assessing the current moment in history” (Peters 2003, 457). Nonetheless, much of his philosophy and pedagogical methods can inspire indigenous movements.

At the core of the Freire’s ideas is the concept of critical consciousness, which he terms conscientização and has been translated into English as ‘conscientization.’ Finger and Asún (2001, 84) describe the term as “the process by which a group become aware
of their cultural oppression, of their ‘colonised mentality’, and by doing so discover that they have a popular culture, a popular identity and a societal role.” The way to achieve this is through problem-posing education involving a dialogue between educators and learners. This method treats the learners of marginalized groups not as mere Objects to be filled with knowledge, but as subjects who need to break from their ‘culture of silence’ and become knowing Subjects who have the ability to create new democratic futures. Critical consciousness makes them understand more about the reality in this world, which then leads them to take action to transform the world by giving new meanings to social relations. Consciousness emerges from a dialogue between educators and learners, which affect both the educators and learners in understanding reality and which can lead them to transform an unjust society into a democratic one. Freire considers that students are teachers, and vice versa. In contrast, mainstream education systems treat students as if they are empty bottles, to be ‘filled’ with required knowledge and values in order to able to function in society as good citizens. Freire refers this as ‘banking education.’

If the contents of mainstream literacy campaigns are for national interests which are often detached from those of ordinary people, critical literacy focuses on ordinary language because Freire believes that literacy will be emancipatory and critical only if the language of the people is used (Freire & Macedo 1987,159). In rural Latin America, for example, critical literacy campaigns explore the situations of the peasants in large landholding (hacienda). Through reading and writing, peasants can understand the reality around them, including the social structures imposed upon them. Words become the medium for the educators and learners to explore and exchange ideas about the meanings of the selected words. Through such dialogue the learners have critical understanding of their lives and thus reach a level of critical consciousness.

Participatory research has a set of principles (Hall 1975, 28-30). It has a clear ideological implication and emphasizes processes within a community of immediate and direct benefit. The community is involved in all stages of research as they are the researched and the researchers at the same time. The research should involve all parties that can contribute to the change embedded in the research goal. Its process should be a total educational experience and be a continuous dialogue (dialectic). Finally, it should
encourage “the liberation of human creative potential ad the mobilization of human resources for the solution of social problems” (Hall 1975, 30).

Due to the liberatory and emancipatory nature of such literacy campaigns, Freire’s ideas become the base principles on which community could be organized. Moreover, these ideas also affect the development of participatory methods in rural development and social scientific research, particularly in the forms of participatory rural appraisal (PRA) and participatory action research (PAR) (Chambers 1994; Rahman 1991).

However, Freire’s ideas are problematic. Finger and Asún (2001) suggest that the animators (educators) still control education program, because they retain an overall vision. This means that true dialogue between educators and learners is difficult, if not impossible, because unequal power relations still exist. These authors also criticize Freire’s uncritical stance regarding development, leading to some authors accusing Freire as working within the Enlightenment project. Yet, Giroux (1995, 180) argues that in his later works Freire questioned modernity and became a “border crosser,” who constantly crossed over the “terrain of otherness” as “an intellectual posed between different cultural, epistemological, and spatial borders.”

Border-crossing deals with “the issues of social justice and equality among groups divided in very concrete ways by the powerful but often invisible borders of [identities and class]” (Elbaz-Luwisch 2001, 83). It highlights the importance of voice. Giroux suggests that it “challeng[es], remap[s], and renegotiate[s] the boundaries of knowledge that claim the status of master narratives, fixed identities, and an objective representation of reality ...(and) recognize[s] the situated nature of knowledge, the partiality of all knowledge claims, the indeterminacy of history, the shifting, multiple and often contradictory nature of identity” (Elbaz-Luwisch 2001, 83). The concept, therefore, acknowledges the multiplicity of knowledge that requires anyone to put one’s two feet in two realms with equal position.

If this concept is introduced into participatory research, in order to have true, meaningful dialogues the “educators” should allow themselves to cross over different zones of cultural diversity in order to move beyond their own cultural roots. Educators and learners have their own sets of worldviews, values and social practices – or
Discourse in Gee’s (1989a) term. Therefore it is crucial for the educators to understand the Discourse of the learners, so they can understand the meanings that the learners imply and learn from the latter. This means that educators should have their feet on two sides in a dialogue, their own discourse and values, and those of the learners.

Participatory methods are also not free from problems. For one thing, not all members of a community become critically consciousness, since many components of their lives, especially in decision making processes, are not distributed equally. Secondly, Brock (2002) argues that participatory methods in development programs tend to be a means of knowledge production, while undermining the importance of action and consciousness in changing people’s lives.

2.5. Summary

In an attempt to argue that counter-mapping is a form of cartographic encounters, I explain different phases of cartographic encounters which took place in both in the field and in the mapping labs or libraries as suggested by Lewis (1998). In the beginning the encounters had very strong imperialistic tendency by taking indigenous spatial knowledges into modern maps for the purpose of appropriating lands/waters of colonial interests. Since the 1970s, when social scientists began to realize the embeddedness of knowledges in their respective cultures, scholars began to evaluate cartographic encounters not merely from Western perspectives and respect the diversity of knowledges. In line to such new perspective, I borrow the idea of ideological model of literacy studies to argue on the existence of diverse spatial literacies, including cartographic literacy which promotes techno-scientific tradition of map-making and map-reading. Unfortunately, counter-mapping as it is now cannot represent spatial knowledges other than cartographic maps due to the insistence of modern institutions (particularly nation-state and capitalist corporate bodies) in employing techno-science. Cartographic enterprise cannot, however, escape from geographic translation because a map must meet cartographic conventions, which is a form of language. Such translation can discount the richness of the original spatial knowledges. Moreover, the prevailing cartographic literacy tends to promote as to how an individual uses maps to function well
within a modern society. Cartographic literacy is, therefore, has dispossessing and disempowering effects. To overcome this problem I further borrow the idea of Paulo Freire on critical literacy.

Freirean critical literacy tries to reveal unequal power relations embedded in the text and to take actions to pursue a more democratic society. Such society is only possible if the encountering individuals engage in a true, meaningful dialogue and allow themselves to break away from the comfort zones of their respective cultures to embrace the diverse cultures around them. By treating maps as texts and by treating mapmaking by local communities as a means of liberation and emancipation, I propose a critical cartographic literacy. Such literacy allows a dispossessed individual to gain consciousness about the sufferings created by maps of his/her land/water produced by outsiders and make their own maps by giving new meanings. Counter-mapping is thus a means of transforming existing power relations on space, especially by embracing local/indigenous spatial knowledges in mapmaking.
CHAPTER 3
THE DEVELOPMENT OF COUNTER-MAPPING MOVEMENT IN INDONESIA

3.1. Introduction

The counter-mapping movement is one of many social movements in Indonesia each of which has its own history. The counter-mapping movement in Indonesia began in early 1990s within environmental movement circles and was intended to promote indigenous peoples’ control over their lands and resources to provide alternatives to the failing dominant development paradigm. In this chapter I discuss the development of the movement at the national level by relating it to the social political contexts of the movement using the frameworks of the discourses of environmentalism, indigenous rights and development alternatives. To do that, I divide the development into several periods.

3.2. The Roots of the Counter-mapping Movement

During the colonial period (Boomgaard 1999) and in early independence years, the focus of environmentalists in Indonesia was the preservation of nature. In 1970s economic development began to dominate public policy under the authoritarian rule of Suharto through New Order regime. His policy of de-politicizing grassroots organizations (including student organizations) and weakening the political parties triggered a new wave of environmental movement (Aditjondro 2003, 73-146). Inspired by the 1972 Stockholm conference on environment and learning from their failures in staging protests, student activists of the 1970s found a new way to resist the Suharto’s export-oriented industrialization program with its heavy reliance on foreign investment on natural resource exploitation, particularly commercial logging and mining. Also, Emil Salim, then the State Minister on Development Supervision and Environment, felt the need to have civil non-governmental organizations promote and monitor environmental issues as his ministry did not have the capacity to perform those functions (Aditjondro 2003; Parlan & Adi 2009). Salim then encouraged NGO activists, nature lovers and professionals to gather their forces in an informal working
group known as *Kelompok Sepuluh* (Group of Ten) in 1978. In October 1980 this group organized a national conference with funding from the Indonesian Wildlife Fund, then chaired by former vice president and noted statesman Sri Sultan Hamengku Buwono IX. This led to the formation of Wahana Lingkungan Hidup Indonesia (Indonesian Forum for the Environment), widely known by its abbreviation – WALHI.\(^{19}\) Environmental groups grew rapidly from only 80 in 1980 to 486 in 1986, 350 of which were WALHI’s members (Parlan & Adi 2009). The enactment of the Basic Environmental Law in 1982, which WALHI and Kelompok Sepuluh helped draft, further provided political opportunities of the movement.

In its earliest years, as its first executive director explained, WALHI was meant to act as “a national communication forum of NGOs interested and concerned in environmental conservation and management” (Witoelar 1984, 415). This was aimed to increase NGOs’ environmental awareness and perform a bridging role for NGOs, the state and the society at large. In this period, the primary environmental concerns were the impacts of industrial activities and environmental protection. Such concerns were similar to that of the modern environmentalism in industrial countries. Appearing as it did in the late 1960s after Rachel Carson had published *Silent Spring*, this period also had a strong neo-Malthusian influence concerned with the fate of the earth due to high population growth and depleting natural resources.

As the dominant economic model created unprecedented environmental degradation and severe social problems, development industry and environmental activists engaged in discussions search for alternative models of development and environmental management. NGOs in Indonesia also criticized the prevailing approach to development (e.g., INFID 1993). Some scholars consider the model victimizes people (Budiman 1993). The publication of the Brundtland Commission’s report, *Our Common Future* (World Commission on Environment and Development 1987), was a crucial step as it promotes environmental concerns into global politics and proposes sustainable

\(^{19}\) In early 1990s it began affiliation with the Friends of the Earth (FOE) International so that it is now FOE Indonesia.
development as a new concept. Both scientists and activists then began to seek alternative development paradigms, including looking at the disappearing local knowledges and practices.

The decade of 1980s was also important for social sciences as the issue of power relations entered the center stage. This new paradigm affected the perspectives of social scientists in understanding development and environmental problems. It also marked the change in viewing poverty as the source of environmental problems to seeing poverty and environmental degradation as the outcomes of growth-induced state policies. In other words, the current environmental problems are the outcomes of the prevailing political economic situation, which has a global link, particularly due to inequalities in resource use and extraction. Recognizing this situation, called by Bryant & Bailey (1997) as the ‘politicized environment’, environmental NGOs started to involve themselves in political activism.

At the same time, human rights activists promoted the concept of the rights in development (Pangaribuan & Harman 1989b) as a response to human rights violations in implementing development projects. Such rights derive from the Universal Declaration on Human Rights with the emphasis on participation and accountability (Pangaribuan & Harman 1989a, 19). A later elaboration of this idea states that the right should give “a vast space for the people to participate, contribute and enjoy the outcome of the development in all aspects supporting the fulfillment of the values of political as well as econom[ic], social and cultural rights of the civilians” (INFID 2006, 2).

These, in combination, created an inclusive model of development. Participatory development then enabled local communities to participate meaningfully in development projects. In Indonesia participatory development began in the 1980s (e.g., Korten & Sjahrr 1988), an opportunity seen by many NGOs as a path to democratization under an authoritarian regime (Sastrodihardjo 1992).

In environmental issues the paradigm shift led to the development of community-based natural resource management (CBNRM). Discussing the issue in the

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20 WCED (World Commission on Environment and Development) defines sustainable development as ‘development that meets the needs of the present without compromising the ability of future generations to meet their own needs’ (p. 43).
context of conservation, Western and Wright (1994) argue that environmental degradation, participatory development, human rights and indigenous peoples movement were all precursors to CNBRM, which tried “to make nature and natural resources meaningful to rural communities” who “regain control over natural resources and… improve their economic well-being” (Western & Wright 1994, 7). CBNRM became a new approach for donor agencies and academicians who tried to integrate development practices in 1990s. NGOs quickly adopted this as a part of resource mobilization strategy. Tsing et al. (2005, 1) argues that there are several main premises of CBNRM: “that local populations have a greater interest in the sustainable use of resources than does the state or distant corporate managers, that local communities are more cognizant of the intricacies of local ecological processes and practices, that communities are more able to effectively manage those resources through local or traditional forms of access.” Such premises are based on the assumption that local communities are wiser and more experienced in managing their resources. For NGOs this approach also became a means of achieving social justice. In implementing CBNRM projects participatory research methods, particularly participatory rural appraisal (PRA) and participatory action research (PAR), became popular, because they enable the community to voice their concerns.

Environmental activists in Indonesia also adopted this view, realizing that many communities became poorer when they lived in environmentally vulnerable areas which were “trapped in a downward vortex of economic deprivation and ecological degradation” (WALHI 1991, 10). People in these communities became labeled ‘development refugees’ when they were displaced spatially, economically and politically by the state’s planned economic development. This then led environmental NGOs to attempt to empower the poor to gain access and control of natural resources, or ‘environmentalism for the poor’ (Guha & Martinez Alier 1997). Advocacy became a new method in the movement. This approach became more important as the NGOs replaced political parties in voicing people’s needs and became friends of the development victims (Budiman 1993).
Environmental advocacy – i.e., organized efforts to change state policies pertaining to environmental issues – became central to environmental NGOs’ programs. In Indonesia, SKEPHI – The Indonesian Network for Forest Conservation pioneered this approach in order to pursue environmental justice (Eldridge 1995). This new approach changed NGO-state relations, since the NGOs positioned themselves in opposition to the state. In 1988 WALHI and the Legal Aid Institute (LBH) even filed a lawsuit on suspected water pollution of a state-backed pulp and paper company (PT Inti Indorayon Utama) in North Sumatra. The Minister of Environment was one of the plaintiffs, something that Emil Salim did not think possible when he assisted in WALHI’s birth.

Political activism was crucial to social movements in Indonesia during late 1980s and up to 1998. This was when Suharto’s New Order authoritarian regime controlled peoples’ lives and the state economy, so that it became more oppressive at national and local levels. Demands for democratization grew among social movements in the 1990s and environmental movements also adopted this approach through the demand for democratization of natural resource management (Hafild 2005). As military forces were often involved in pressing local communities to ‘give up’ their lands for investments for commercial logging, plantations and mining, NGO activists saw their movement as a part of a wider movement in civil society. WALHI, for example, adopted:

… advocacy of environmental problems as a part of the movement of non-governmental organizations within the framework of empowering civil society. This means WALHI has to be a vehicle to struggle for the fulfillment of justice, equity, people’s control of natural resource allocation policies, fair trials, as well as good and clean governance.” (WALHI 1997, 1-2)

Indonesian NGOs, like their counterparts elsewhere, are concerned with social transformation through the “defense of livelihood” (Friedmann & Rangan 1993). One of the strategies is to assist marginalized communities participate in the decision-making process about natural resource management. In the case of Indonesia, the environmental movement agenda is twofold: creating ‘political space’ for democratic participation (Riker 1994/1995) and pursuing an environmentally sound natural resource management. Both subjects cannot be separated from each other, as they are closely interrelated. As
Hafild (2005) implies, it was the very reason why environmental movements in Indonesia quickly adopted the idea of community-based natural resource management (CBNRM), an approach that was becoming popular globally.

Siscawati (2012) considers that CBNRM in Indonesia actually began in 1950s, when socialist ideology was accepted by many, leading to suppression by the New Order regime. It was in 1978 when Indonesia hosted the World Forestry Congress, with a theme “Forest for People,” that the approach reappeared under the concept of community forestry. The Ministry of Forestry integrated the idea as part of the social forestry program, partly funded by the Ford Foundation. Later in mid 1990s the foundation’s Jakarta office officially launched the Community Forest Management Initiative. Jeff Campbell, a former program officer on Community Based Natural Resource Management at the office, stated that the initiative was to “increase access to and control over Indonesia’s forest resources by rural communities directly dependent on them” (Campbell 1998, 25; italics in original). With a large portion of its funding going to NGOs, environmental activists now joined this movement in the early 1990s.

In 1993 a small workshop attended by NGO activists discussed the key elements of community-based forest management and finally led to the introduction of new term, *Sistem Hutan Kerakyatan* which is abbreviated as SHK (Pilin 2002). The term is a translation of community-based forest system management, and has a core belief that “communities can manage forest independently if their rights over land and forests are respected, recognized and protected” (Pilin 2002, 10). This social movement fights for “the local autonomy and organized resource control” and “to redefine their local knowledge on forests” (Pilin 2002, p 19). Under this initiative activists strove to break the state monopoly on natural resource management by promoting locally controlled environmental management to allow local communities to have control over the resources that they have used and managed. The activists often claim that local management practices, particularly those of indigenous peoples are sustainable. Pilin (2002), for example, believes that indigenous peoples are the best forest managers. The environmental movement then turned to promoting the causes of indigenous peoples, particularly the recovery of indigenous rights undermined by the state. This was
necessary for communities to maintain their livelihoods under the frameworks of economic and social rights (see Moniaga 1993).

The close link between the environmental movement and the indigenous movement in Indonesia led to a key meeting in Tana Toraja, initiated by WALHI. The inspiration of this meeting came from the concerns over the conditions of many groups in the country who shared similar problems, and the growth of the international indigenous movements as seen during Kari Oca conference prior to the Earth Summit in 1992 and the implementation of the 1993 International Year on Indigenous Peoples that led to the adoption of the International Decade of Indigenous Peoples. The meeting was kept secret to avoid government suppression. It was hosted by WALHI’s key figure in South Sulawesi who was then a village head. The participants of the meeting were representatives of affected communities, academicians, and NGO activists (mostly from WALHI’s network). They discussed the conditions of indigenous peoples in Indonesia, particularly the displacement of local communities under the resource exploitation approaches of Suharto’s New Order.

There are two important outcomes from this meeting (JAPHAMA 1998). First, the term masyarakat adat as a translation of indigenous people was introduced. Sandra Moniaga, one of the initiators of the workshop, explains the reasons of the adoption: the term had been widely used by the peoples to identify themselves, and it was socially and politically correct under Suharto’s authoritarian rule as in some provinces the government initiated the formation of Dewan Adat (Moniaga 2010, 310). They decide to adopt a definition of the term which is a human group from the same ancestral lineage who inhabit a certain geographical area and has a distinctive set of value, ideological,

\footnote{Indigenous peoples in Asia are not the same as they are in the European colonies (primarily Americas, Australia, and New Zealand). Most peoples in the continent are original population. So the application of the term is complicated (Kingsbury 1998).}

\footnote{The translation of the term is problematic. Most activists use masyarakat adat as a direct translation. Meanwhile the government officials employ masyarakat hukum adat and argue that all Indonesians are indigenous because they are original populations of the country. To complicate this situation, in 1993 a translation of ILO Convention Number 169 concerning Indigenous and Tribal Peoples in Independent Countries was published. In their Foreword, Stepanus Djuweng and Sandra Moniaga ([1993]) translate Indigenous People as Bangsa Pribumi, and Tribal Peoples as Masyarakat Adat. There are several authors who debate the use of masyarakat adat (Afiff & Lowe, 2007).}
The second outcome was the formation of JAPHAMA (Jaringan Pembela Hak-hak Masyarakat Adat/Network for the Defense of Indigenous Peoples’ Rights). Moniaga states that the birth of the network was in response to both the domestic policies that disadvantaged *masyarakat adat* and so such people could be part of the growing international indigenous movement.

From 1993 onwards key issues for this growing movement were indigenous knowledge and rights in natural resource management. Indigenous knowledge is considered the source for alternative approaches to natural resource management to replace the perceived failing mainstream approaches (Moniaga 2005). Such approaches are seen as much more environmentally friendly and sensitive. Indigenous peoples are thus viewed as wiser in this regard than the mainstream society, as Nazarius (2000, 1; my translation) writes:

> We, *Masyarakat Adat*, are apparently able to maintain and nurture natural balance sustainably and continuously from generation to generation with rules and natural resource management system we inherited from our ancestors. But when outsiders intervene in natural resource management particularly land and forests, initiated in 1970s and [has occurred] until today, once pristine nature has changed to chaos day by day.

Many NGO’s projects were involved in this under the rubric of CBRNRM. Protection of indigenous rights, on the other hand, was mostly carried out through concern for intellectual property rights of genetic resources collected or extracted in indigenous managed areas (see Posey 1990, 1996). This issue was part of the Convention of Biological Diversity, particularly article 8(j). An Indonesian NGO network, Bioforum, was established specifically to monitor the implementation of the convention. In addition, Bioforum approached the protection of indigenous rights through the reform of state laws that were unfavorable to masyarakat adat (see Moniaga 1993).

For the next few years the members of JAPHAMA built indigenous movements in the country through raising the problem of dispossession, particularly spatial dispossession. It held a few meetings during the New Order regime, usually in secret to

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23 The original Indonesian text: “*Kelompok masyarakat yang memiliki asal usul leluhur (secara turun temurun) di wilayah geografis tertentu serta memiliki sistem nilai, ideologi, ekonomi, politik, sosial dan wilayah sendiri.*”
avoid government’s suspicion. Once Suharto stepped down with nine other networks and three indigenous groups JAPHAMA launched a crucial project of organizing a first ever national congress network of masyarakat adat.

The congress, Konggres Masyarakat Adat Nusantara (Congress of Masyarakat Adat of the Archipelago, KMAN), was held in March 1999 in a five-star hotel in Jakarta to attract the attention of the country. Representatives of masyarakat adat expressed their frustration towards state policies which did not recognize the existence, let alone to protect the rights, of masyarakat adat. These groups had been dispossessed spatially, culturally and socially, through policies in favor of the large-scale commercial activities. They expressed this frustration in a slogan: If the State does not recognize us, we will not recognize the State either (Kalau Negara tidak mengakui kami, kami tidak mengakui Negara). They demanded that the State change its policies related to masyarakat adat. This congress led to the formation of Aliansi Masyarakat Adat Nusantara (Alliance of Indigenous People of the Archipelago or AMAN). It also adopted the same definition of masyarakat adat as previously used by JAPHAMA.

What constituted indigenous rights to AMAN follows that of other international indigenous movements. During the 1999 congress AMAN declared: “We, masyarakat adat, are the communities who have lived for generations since our ancestral time in an adat territory, who possess sovereignty over the land and natural wealth, social and cultural lives based on adat law, and where the adat institution governs the community life” (Catatan Hasil Kongres Masyarakat Adat Nusantara 1999, 9). Another manifestation is the demand that the law and state policies be reformed in order to recognize and protect rights to land, tenures of natural resources, adat system and cultural

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24 The term Nusantara generally refers to Indonesia, though in the past it used to cover insular Southeast Asia.
25 Since 1999 the amendments of Indonesia’s 1945 Constitution and a number of new law contains articles on the recognition of masyarakat adat and their rights. However, the recognition is generally subject to a set of conditions that lead to the opposite effects.
26 Its Indonesian version is: “Kami, masyarakat adat, adalah komunitas-komunitas yang hidup berdasarkan asal-usul leluhur secara turun-temurun di atas suatu wilayah adat, yang memiliki kedaulatan atas tanah dan kekayaan alam, kehidupan sosial budaya yang diatur oleh hukum adat, dan lembaga adat yang mengelola keberlangsungan kehidupan masyarakat.”
identity, the right of self-determination through adat institution, and customary laws (AMAN, ICRAF, & FPP, 2003). Slowly AMAN evolved into an identity movement.

In its third congress in Pontianak (2007), apart from adopting a hierarchical structure, AMAN took a slogan introduced by the first President of Indonesia (Sukarno) as its motto: mandiri secara ekonomi, berdaulat secara politik dan bermartabat secara budaya (economically independent, politically autonomous, and culturally dignified). The motto shows a shift into an identity movement by embracing the idea of self-determination, a term that the Government of Indonesia dislikes due to its connotation of establishing a new state. AMAN follows the principle of self-identification in which a given indigenous group determines themselves whether or not they want to consider their community as masyarakat adat. Such identification, however, is assessed against a set of criteria as mentioned in the definition of masyarakat adat to prevent free riders and non-indigenous groups to join the wagon.

The year of 1999 was also an important year for restructuring of relations between central government and regional governments when parliament passed a law on Regional Government (Number 22 Year 1999)\(^\text{27}\) which marked a new decentralization era in the country. Decentralization in Indonesia is a reaction to the centralization of power and state wealth in Jakarta during New Order, which had led to disenchantment in other regions. The unfair distribution of revenues generated from the natural resource extraction was the major cause of the tensions between the center and the regions, some of which (such as Aceh, Papua, East Kalimantan and Riau) had rebelled or declared their intentions to be independent from the Indonesia. In addition, the formation of the system of uniform village organizations throughout the country destroyed local governance systems.

The Act began the process of restructuring the relations between central government and regional governments. It mandated the transfer of most of the central authority to regional governments. The new law also mandated that the central government to transfer many of its activities to regional governments. As a result, new

\(^{27}\) This law has been replaced by Law No. 32 Year 2004.
provinces and districts were formed. Not only did regional governments receive more power, but people now had opportunities to influence decision making as the chain is shorter. Decentralization policies also required more bottom-up development planning processes, including the promotion of participatory planning processes, from the village level up to the national one.

The law also recognized the existence of indigenous villages. Although the central government requires some standardized practices and institutional arrangements, villages have more freedom in deciding on their governance. Indigenous groups used this opportunity to (re)construct their identities by revitalizing their own governance systems, particularly in natural resource management, through the issuance village regulations. Village autonomy is a landmark for indigenous movements. Theoretically masyarakat adat had the power to influence districts lawmakers and district heads in regard to adat lands or practices. In reality most policies at the district level, where most authorities in natural resource management exist, are more favorable to business interests.

With environmental and indigenous movements flourishing, agrarian movements, later peasant movements, entered the landscape of social movements. These new movements were mainly a response to New Order policies on lands that had created peasant dispossession (see Dianto Bachriadi in Borras 2005). Agrarian issues had been suppressed because agrarian reform – a program to rearrange land to reflect social justice in land ownership – was considered as of communist nature under Suharto’s rule. Throughout the 1980s activists often staged protests and rallies together with farmers, primarily in Java, where land had been appropriated by plantation companies without proper compensation and even the former’s consent. These actions were about rights to land, which later the activists found insufficient as they did not touch the core issue, i.e., the structural inequality that led to poverty. Activists realized that while they could mobilize peasants to stage protests/rallies, there was a need for peasants to organize themselves and fight for their causes. Therefore, in 1990s activists adopted two strategies: the promotion of agrarian reform as the only way to break the unfavorable land issues, and the organization of peasant unions. For the former the activists engaged mostly in advocacy and research, whereas for the latter they worked directly with the peasants to
form unions. In 1995 both strategies culminated into the formation of two national coalitions: *Konsorsium Pembaruan Agraria* (KPA, the Consortium for Agrarian Reform) for the former, and consolidation and formation of the Federasi Serikat Tani Indonesia (Indonesian Federation of Peasant Unions, or FSTI). KPA has been also active working directly with peasants as many of its members also belong to peasant unions.

Both movements used the opportunity provided under the Basic Agrarian Law (BAL, No. 5 Year 1960). Drafted and passed during the hey-day of socialist ideology in the country, originally the law tried to break from the shadow of the colonial past and its strong leaning on liberal-capitalist ideology (Fauzi 1999, 53-115). The law supports five principles that imply strong nationalist ideology on top of the socialist one.28

In its first years KPA focused on questioning state land claims through the concept of *hak menguasai negara*29, land administration, land market, and *tanah adat* (customary lands) (Badan Pelaksana KPA 1998). The officers of the organization engaged in studies and published books, including a key book on agrarian reform (Bachriadi *et al.* 1997), making the agrarian issues popular among NGO activists. The activities of peasant unions, on the other hand, were mostly under the radar screen until the demise of New Order regime. As state control weakened significantly, peasant unions took direct actions through occupying lands that were once theirs and had become plantations (Wijardjo & Perdana 2001). These land reclaiming30 actions occurred in

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28The principles are: only Indonesian nationals can own lands; the state does not own lands but has the highest authority to govern them for the prosperity of all peoples (*hak menguasai dari negara*); land has a social function so that its use is not for mere private interests, and may not harm other people; land reform is necessary to redistribute lands to achieve just land ownership structure; and the state has to produce land use plans to reach “Indonesian socialism” (Fauzi 1999, p.76).

29Article 2 of BAL provides the rationale of *hak menguasai negara* which is that the State is the manifestation of all peoples, therefore the State will act on behalf and for the interests of the peoples. The rights entail the authority “to regulate and administer allocation, utilization, supply, and conservation of land, water and airspace; to determine and regulate legal relations between people and land, water and airspace; determine and regulate legal relations between people and legal actions concerning land, water and airspace” (Article 2[2]). With such understanding the term should be interpreted within the framework of governance, which places the government as administrator, regulator and enforcer. However, in reality since Suharto took power 40 years ago the government tends to act as legal person that enables it to claim the rights to own over the lands. If BAL intends to eliminate the state domain concept, in which the State claims all untitled lands as its property, New Order state reversed the process while still maintaining the Law for its land policies. Such practice has severely affected the lives of indigenous peoples and peasants throughout the country, while lands are crucial for the peoples’ livelihoods and identities.

30Wijardjo and Perdana (2001, p. 81) define reclaiming as “a resistance act conducted by oppressed people to justly regain their rights [on] land, water and other natural resources, as well as other production
many places but particularly in Java where most peasants only had only very small holdings. These movements are important background for the counter-mapping movement, because many of counter-mapping activists also engaged in at least one of these movements.

3.3. A Brief History of Counter-mapping Movement in Indonesia

Counter-mapping started in East Kalimantan province. It began when a group of activists affiliated with WALHI accidentally "discovered" the power of maps. They found out that in 1990 the indigenous community of Tering Lama in East Kalimantan was successful in defending their lands from the appropriation by a gold mining company through the use of an old map produced by the colonial Netherlands Indies government (Sirait & Moniaga, n.d., 7). Inspired by this "discovery," the activists started to spread the words around especially within WALHI's circles. For example, Moniaga (1993, 145), one of the team members, argues that indigenous forest communities needs to “delineate their territorial perimeters” to inform outsiders about the former’s existence. Some communities had maps from colonial era, while others need assistance in “identifying their territorial limit” (Moniaga 1993, 145). Moniaga suggested that mapping could be conducted by independent groups or taskforces comprised of government mapping agencies. She envisioned that “the delineation process would be consultative and involve all stakeholders in a kind of musyawarah process” (Moniaga 1993, 146).

Later in 1992 the then World Wildlife Fund Indonesia Program (now World Wide Fund for Nature [WWF] Indonesia) initiated a mapping exercise in the kampung of Long Uli at the periphery of the soon-to-be Kayan Mentarang National Park as a part of its Ford Foundation-funded Culture and Conservation program. This exercise assisted the community map the boundaries of their kampung and was thus the first counter-mapping exercise in Indonesia. It was led by Jefferson Fox of the Honolulu-based East-West Center with the participation of the staff members of WWF (including Martua Sirait who later also assisted Pancur Kasih in developing mapping methodology) and the Ministry of Forestry. It applied a method that Fox (1989) had developed in which mapping was means for the attainment of universal people’s welfare” (my translation).
applied as a means of analyzing social forestry. This exercise employed a popular technique of the day, Rural Rapid Appraisal (RRA). In this approach the community became the informants for the researchers. In the exercise activists from local NGOs joined as interns, including Kristianus Atok from Pancur Kasih who joined in late 1992 under the auspices of WALHI (Atok 2008). This led to NGOs in Indonesia to seriously adopt counter-mapping as a strategy to reclaim local community rights on land and water.

In the first half of the 1990s the organizations actively involved included LATIN (Bogor, West Java), Pancur Kasih (Pontianak, West Kalimantan), PLASMA (Samarinda, East Kalimantan), and Baileo Maluku (the Moluccas). Apart from LATIN who already had expertise in GIS, other organizations had to learn from scratch or had staff members with basic mapping knowledge. At the request of Alix Flavelle, whom he met during a writing workshop in Honolulu when he wrote his paper on the mapping in Kayan Mentarang, Martua Sirait recommended that the representatives of these organizations attend a regional training workshop on community mapping in Chiang Mai (Thailand) in December 1993 (Flavelle 2000). Flavelle then went to Indonesia to provide similar training to members of Pancur Kasih (in January 1994) and Baileo Maluku (in 1995). Subsequently the NGOs launched their mapping programs using slightly different methods. Thirteen persons, including representatives of these NGOs, attended the International Mapping and Land Use Planning Methods Workshop held in the Philippines in late October 1995. In the meeting the Indonesian participants learned that their mapping methods were technically more advanced than those of other participants (Anonymous, n.d.-a, p. 46). One of the reasons was that many activists involved in the exercises were members of nature lovers clubs and or graduates from forestry schools who had basic training on surveying (Martua Sirait, personal communication, 2011). However, the political impacts of the maps they produced were miniscule. Therefore, they showed an interest in learning the policy environment in the Philippines on community-based natural resource management (BSP 1996, 107).

Ms. Flavelle, a geographer, had taken part in mapping exercises with First Nations in Canada before she gave trainings to many groups in Southeast Asia (Flavelle 1995).

The workshop was organized by the Philippines Association for Intercultural Development (PAFID) and Upland NGO Assistance Committee (UNAC) with a funding from BSP’s Peoples and Forests Program with participants from six countries (BSP, 1996, 105-107).
The growth of mapping exercises in Indonesia in mid 1990s was largely due to the agenda of donor agencies. Among these donors the Ford Foundation and USAID-funded Biodiversity Support Program (BSP) project were of great importance. Ford Foundation provided the support through its CBNRM scheme whose goals were to “[strengthen] the capacity and bargaining position of local communities in land use planning and forest management decision making” (Campbell 1998, 26). Meanwhile BSP, under its KEMALA program to decentralize biodiversity management in Indonesia, strived to build “nascent coalitions that form naturally around shared, rather than donor-driven concerns, including coalitions emerging around joint management of protected areas, community-based spatial-use planning, recognition of traditional agro-forestry regimes, and community-based mapping” The KEMALA program was meant to be “a network of well informed, technically competent, creative and politically active individuals and non-government organizations concerned with community-based natural resource management across Indonesia” In short, donor agencies became key actors in engaging Indonesian NGOs with the circles of epistemic communities y bringing in consultants to introduce counter-mapping method and in transforming the NGOs to be parts of these communities.

An important impetus to the counter-mapping movement was a grant from BSP to LATIN to organize a week long National Workshop on Land Delineation and Community Mapping Methods. The initiators of the workshop were the participants in a workshop in the Philippines. The workshop took place in a resort area near Bogor in May 1996 with field trips to Lampung, Jambi and West Kalimantan, to observe the sites of LATIN, WWF Indonesia and PPSDAK Pancur Kasih respectively. The workshop was to “formulate the strategy of community mapping movement [among] NGOs in Indonesia” (Anonymous, n.d.-b, 2). In the meeting the participants learned about past experiences of community mapping exercises, particularly on the lands of masyarakat adat. The most important outcome of the meeting was the formation of Jaringan Kerja Pemetaan Partisipatif (Community Mapping Network) or JKPP. The main mandate of this network was to develop and disseminate community mapping methods as well as serving the needs of its members (including advocacy, technical assistance and topographical maps)
(Anonymous, n.d.-a). All of these were aimed at providing methods for masyarakat adat to gain recognition of their rights over land and water. JKPP then planned to have a national meeting for masyarakat adat to discuss this goal (Anonymous, n.d.-a), and became one of the organizers of the Indigenous Peoples Congress in 1999.

In its beginning phase, JKPP focused on the promotion of methods to NGOs and local communities, particularly masyarakat adat. The national secretariat of the network initiated the development of mapping methodology (led by Alix Flavelle), organized a series of trainings in many parts of the country, and conducted studies on spatial issues. For capacity building, JKPP relied on PPSDAK Pancur Kasih to organize training, as this Pontianak-based organization was considered to possess sufficient capacity and resources. This training program produced mapping facilitators for many parts of the country. These facilitators have become important promoters of counter-mapping approaches, helping communities defend their lands from corporate appropriation. Moreover, to learn more about counter-mapping in other countries JKPP sent mission teams to Canada and Thailand in early 1997. BSP-KEMALA was the major donor in this phase.

The fall of Suharto provided new opportunities for the counter-mapping movement. Previously communities and NGO activists often conducted mapping secretly, such as in Aceh during civil war period (Daud 2009), or disguised mapping under state focused village development planning. But this became unnecessary under the decentralization program. At same time the idea of “good governance” became part of the state’s approach, as a way to fight against corruption. This again provides new opportunities for local communities to gain access to decision making and demand accountability of state governance.

In this period the agrarian movement also started to embrace counter-mapping approaches as a means to provide bases for negotiation in land disputes (see Lukito & Karyanto 2009), as well as for planning agricultural lands (Faryadi 2005). After the turn into 21st century JKPP facilitated training sessions for peasants unions, particularly in Java where the agrarian movement has its stronghold (Hanafi 2006).
After 2000 counter-mapping proponents also began to engage in development planning. The decentralization program opened opportunities for community participation. Activists led by JKPP sought opportunities to participate in spatial planning processes. JKPP had its own projects on this theme for post-tsunami Aceh reconstruction and in a sub-district in West Kalimantan. This was possible because spatial planning had become mainstream, particularly after a series of anthropogenic-induced natural disasters (floods, landslides), and jurisdictional disputes among different sectors of the government.

The movement has grown significantly. As an illustration, up to 2009 JKPP had 63 institutional members and 35 individual members. Its secretariat calculated that 510 mapping exercises have taken place covering an area of 2.180.949 hectares (Safitri, Achmaliadi, & Pramono 2009). Achmaliadi (2006, 4-5) lists three factors that contributed to this: the desire of local communities to show their existence to outsiders, the lack of information on the spatial and social conditions of local communities within the government agencies, and the promotion of local resource management regimes as alternative to mainstream ones.

3.4. The Goals of Counter-mapping

With the adoption of counter-mapping, participants in environmental and indigenous movements considered it necessary to provide a conceptual foundation for counter-mapping movement. They wanted to show that counter-mapping is very different from state-sanctioned mapping. Sirait and Moniaga (n.d., 9) argue that the former is a process oriented approach as opposed to the goal-oriented approach of the later. The activists are aware that counter-mapping is a process of translation. It allows the community to translate their spatial language in form of mental maps – i.e., geographical information in one’s memory – of their territory that modern society cannot comprehend into modern cartographical maps (Sirait 1996, 61). The products of this approach are “simple and attractive visual data” and “communicative spatial information”

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33 Haryanto and Achmaliadi (2003, p. 7) defines mental map as “knowledge system of local community on their spatiality (keruangan)”
Such translation, Haryanto and Achmaliadi (2003) argue, is inevitable as the written/print culture so dominates the oral cultures of local communities that the latter can hardly survive today. Both authors further argue that counter-mapping is a method that combines modern maps with mental maps.

The goal of counter-mapping movement in Indonesia, particularly for advocacy-oriented NGOs, is very political. This is obvious in the goal of JKPP which is “to assert people’s autonomy over space” (menegakkan kedaulatan rakyat atas ruang), a phrase produced during its second member assembly in 1999. 34 The meeting also set a code of conduct for JKPP’s members, which emphasizes the principles of equality, social justice, independence, and respect/recognition to community rights. Through its programs, JKPP tries to enhance services to `community, employ maps for planning, community organizing and policy advocacy, and reach out for better use of counter-maps. 35

JKPP also has established a goal of counter-mapping, which is “to produce maps of community managed areas through the translation of knowledge that the community owns into modern format as a struggle to restore their dignity and honor” (Safitri & Pramono, 2009, 218). Other activists claim that this movement can achieve the following objectives (Deddy 2006; Momberg, Atok, & Sirait 1996; Topatimasang 2005):

- a means of community organizing;
- conserve and reinforce local/traditional knowledge;
- gain the recognition of resource rights;
- demarcate traditional territories;
- enhance community capacities in managing and protecting their space;
- contribute to the process of conflict resolution on the dispute over space;
- raise and mobilize local awareness of environmental issues;
- increase local capacities in dealing with external agencies; and,

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34 Visi, Misi, Strategi, Program dan Aktivitas JKPP 1999-2002. The term kedaulatan usually refers to sovereignty. But as sovereignty connotes state power over territory and people, autonomy is closer in this context.

35 http://jkpp.org/content.asp?pmid=1&mid=50, retrieved on 03 April 2010
enable local and global groups in playing reciprocal roles in global programs for biodiversity conservation.

In short, counter-mapping is a “simple method to strengthen, identify and understand the existence of indigenous institution and *kewilayahan* (spatial governance regime)” (Haryanto & Achmaliadi 2003, 3).

The method of this kind of mapping combines PRA and surveying techniques which are then integrated into spatial information technology (particularly GIS) (Deddy 2006, 97). This was to response to the weakness of PRA in capturing natural resource use in rural areas (Achmaliadi 2007, 5). With the adoption of participatory approaches, the activists who are engaged in counter-mapping exercises act as facilitator rather than surveyor. Achmaliadi (2006, 4) explicitly argues: ”Community has to be the main actor in the application of this method (planner, actor, beneficiary). Meanwhile outsiders only provide technical assistance in the application.” Flavelle (2006, 16) even moves beyond this by stating: “Local community can choose on their own what to map, conduct surveying themselves and draw their own map.” Another consequence of this approach is that it suggests an application of mindset, terminologies and terms familiar to the local communities (Haryanto & Achmaliadi 2003, 12). These basic concepts are the bases of mapping methodologies, although there are more similarities than differences. Publication of these methodologies are significant (e.g., Atok 1997; Flavelle, n.d.; Hidayat, Adhi, & Bachriadi 2005).

The proponents of counter-mapping in Indonesia use two main approaches. First, internally they rely on CBNRM (Achmaliadi 2006). It is obvious in the widely use of the term *wilayah kelola rakyat* (community managed area). The activists of LATIN first introduced this term in the late 1990s. As a group of foresters, they employ the term within the context of community forestry. However, there is no clear definition of the term. Aliadi (n.d.), one of the founding members of the organization, argues that it entails biophysical (spatial), political and temporal meanings as well as people’s authority in controlling the area in question.

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36Political meaning refers to a space for dialogues among stakeholders to discuss roles of each of them, whereas temporal meaning is the certainty for the communities to have long-term benefit from the area (Aliadi, n.d.).
The use of this term demonstrates the ambiguity of this movement. It endeavors to counter dispossession created by state-sanctioned maps, but there is avoidance of the term ‘territory’ (wilayah) with reference to land and water under the control of masyarakat adat. As a term wilayah kelola rakyat is less political than wilayah. The former stresses the rights to manage an area, but not to own land, thus softening the meaning. This is obvious in the following quotation: “Wilayah kelola rakyat is a school for the community in managing local natural wealth and cultural wealth justly and sustainably” (Pilin 2002, 31). The introduction of this term was likely intended to prevent the state suppressing the movement. It is only recently that the term wilayah adat has been openly used, particularly after AMAN took a stronger political stance. An activist of the organization puts it this way: “Masyarakat Adat possess and control wilayah adat wholly, both the land and whatever beneath it as well as whatever upon it [including] plants, animals, forest, forest products, river, lakes, and sea” (Nazarius 2000, 2).^37 However, this term is used with caution. It is used only to assert historical claims, but is not intended to create “states within a state” (Widodo 2010).

The second approach is through spatial planning. The adoption of this approach is largely to provide a legal foundation for the movement. It relies particularly on the Spatial Planning Act (No. 24/1992) and its derivatives, particularly the government regulation on people’s participation in spatial planning (Peraturan Pemerintah No. 69/1996) and the Instruction of the Minister of Home Affairs on the Socialization of Village Spatial Planning Pattern (Pemasyarakatan Pola Tata Desa, No. 46/1994). The former regulates the rights and duties of people (including indigenous communities, NGOs and commercial entities) in spatial planning processes. This regulation allows people to give input into the development of spatial plans. The latter is to regulate the development of desa (village) “in orderly manner and in harmony with the sustainable environment.”

^37 On its 11th anniversary on March 17, 2010, AMAN launched Badan Registrasi Wilayah Adat, an independent body established in cooperation with JKPP and Forest Watch Indonesia, to accept registration of adat (land) claims. However, wilayah adat is translated into ancestral domain in English, a term popularly known in the Philippines. See www.brwa.or.id, accessed April 4, 2010.
Spatial planning is a component of regional planning which designates areas on earth surface for human activities. In this context space means “a unit of area where human beings and other living creatures live and perform activities as well as maintain their survival” (Budihardjo 1995, 5). For a nation-state spatial planning is also a form of territorialization, controlling and filling in its territory. Vandergeest (1996) argues, after claiming unclaimed lands as its state lands and delineating those lands, spatial planning is a form of ‘functional territorialization’ in which the resource-rich areas are classified into their functions based on ‘scientific’ criteria such as slope, rainfall and soil type. The main outcome of this program was the area zoning to regulate the types of activities allowed in each zone.

In Indonesia spatial planning has been strongly influenced by environmentalism. The first post-independence law on spatial planning (No. 24 Year 1992) was influenced by the State Ministry of Environment under the leadership of Emil Salim (Sugandhy 1999). As a consequence of the law, governments at the district, provincial and national levels have produced spatial plans. However, they are biased toward large-scale economic activities and marginalize local communities (Ginting & Cahyat 2000; Sangaji, 1999). Furthermore, the implementation of those plans have been and inconsistent and even corruptive. Widespread conflicts of spatial use are thus a plausible outcome. Counter-mapping grew in Indonesia partly as a response to this condition and is expected to contribute to an inclusive process of spatial planning. In this regards, Widodo (2008) argues that counter-mapping is a foundation for participatory spatial planning, since a mapping exercise collects social and economic conditions of the community as well as their existing land use that are crucial for spatial planning process.

However, the movement relied particularly on the Spatial Planning Act (No. 24/1992) and its derivatives, particularly the government regulation on people’s participation on spatial planning (Peraturan Pemerintah No. 69/1996) and the Instruction of the Minister of Home Affairs on the Socialization of Village Spatial Planning Pattern (Pemasyarakatan Pola Tata Desa, No. 46/1994). The former regulates the rights and duties of people (including indigenous communities, NGOs and commercial entities) in spatial planning processes. This regulation allows the people to give input for the
development of a spatial plan. The latter is to regulate the development of desa (villages) “in orderly manner and in harmony with the sustainable environment.” The counter-mapping movement in Indonesia is thus a combination of many factors and ideas, all necessary to overall understanding of the movement.

3.5. Summary

The counter-mapping movement in Indonesia evolved as a confluence of a number of discourses and factors. It grew out among environmentalists who had substantial role in introducing the discourse of indigenous rights. This group was also involved and employed the discourses of participatory development and democratization. Later, peasant unions adopted counter-mapping method and thus much influenced the movement with agrarian issues. The movement thus grew as a result of the cultural politics within natural resource management in which the proponents of social movements challenge the dominance of ruling groups (as manifested within the nation-state) in producing spatial knowledge and, at the same time, in controlling and exploiting the territory of Indonesian state. By using the language of the state, the counter-mapping movement clearly promotes an act of autoethnography.

However, despite its resistance nature, the movement has depended heavily on the availability of financial resources which the donor community provided. The roles of the donor agencies were crucial in the movement and often forced the movement to conform to the discourses of the former, which often represent the discourses of the mainstream groups.

This chapter shows that one should understand the complex web of values, meanings and interests to gain a better picture of the counter-mapping movement. The next chapter will show how such values, meanings and interests influence the development of the movement in West Kalimantan, which was added with another set of values and meanings of Dayakness, and lead to the development of a distinctive Discourse of counter-mapping.
CHAPTER 4
THE MAKING OF COUNTER-MAPPING MOVEMENT IN WEST KALIMANTAN

Tanah adalah ibu dan hutan adalah Jiwa
The land is our mother and the forest is our soul
(St. Banjing, an adat leader from Cenayan, August 29, 2007)

4.1. Introduction

In Chapter 1 I discussed briefly the historical background of counter-mapping movement globally (Section 1.5), whereas Chapter 3 discusses the ideological background of the movement in Indonesia. In this chapter I will discuss the contexts and processes that affect Dayak peoples in West Kalimantan leading to the introduction of counter-mapping in the province, particularly on dispossession, resistance and identity formation.

Dispossession has long affected the lives of societies and cultures in every corner of the earth. It is a result of power battles and or unequal power relations. In most cases resistance occurs during and or after the process of dispossession, which affects all aspects of the lives of the dispossessed including their identities. In response to the dispossession and as a means of consolidating its members in resistance movement, the dispossessed groups often (re)construct their identities. They may develop a new set of identities or transform the old ones.

Based on these ideas, I build my argument throughout this chapter. I start with the history of dispossession and resistance among the Dayak in the province. Then I review the history and approaches used by the counter-mapping movement in the province and in particular how a Dayak-based organization has influenced the philosophy and practices of mapping facilitators. Through this review I attempt to identify the Discourse of counter-mapping in the province.

4.2. Dispossession of Dayak in West Kalimantan

The term Dayak (Alloy, Albertus et al. 2008) is a colonial construction for government administration purposes. It is “a collective name that later formed an ethnic label for around 450 non-Moslem indigenous peoples in Borneo” (Djuweng and Krenak 1996) who live in the interior of the island. Such collective identity is due
to physical similarity of the peoples as well as their cultural similarities in longhouses, languages, oral traditions, customs, customary laws, and cosmovision (Djuweng 1998). Dayak peoples have distinctive culture that is closely related to the forests. Alqadrie (1994: 25) even identifies that “forest is the main basis of social, economic, cultural, political lives of Dayak ethnic group” (my translation with italics from original). They use swidden agricultural techniques in for their livelihood and, until 1970s, lived in communal longhouses. They believe in the balance of cosmos (Ukur 1994) and see human being as integral part of nature (Alqadri 1994).

However, until recently, at least those who live in West Kalimantan, Dayak peoples were not proud of to be a Dayak person. Originally, the word ‘Dayak’ had derogatory connotation as it meant ‘people of the interior’. The people of the lowland and coastal areas, who tend to hold the power, generally looked down on Dayak persons. For coastal communities of Borneo and Europeans, the interior upland regions connote primitiveness, “backwardness, stupidity, destiny to be conquered and so on” (Mecer & Florus 1998: 1). During the heyday of the colonial project, for example, the travel accounts of many European explorers provide an image of wild, dirty, childish, pagan headhunters to the Dayak peoples (e.g., Furness 1902; Hose & McDougall 1912; Nieuwenhuis 1929; Reid 1870). The term has a number of spellings – Daya’, Daya, Doya’, Dayo’ and Dayuh – which all mean upper river; whereas the peoples refer themselves as orang hulu (people of the upper river), orang darat (people of the upland), orang pedalaman (people of the inner), and orang kampung (people of the village) (Alloy, Albertus et al. 2008). The first group of names was given either by the Malays who live in the coastal areas or by Dutch colonial administrators for whom Dayak was a pejorative term carrying the connotation of backward, primitive people. Unfortunately, the alternative terms have also suggested inferiority. Such image of the Dayak peoples has led to “civilizing missions” that ultimately led to dispossession, which I explore in a previous study (Pramono 2001).

Being a Dayak was thus a disadvantage due to stereotyping and marginalization. Many Dayak persons unconsciously reinforced such stereotypes as they considered their identity inferior, as they seemed unable to compete with other groups economically,
socially, and politically. Some maintain their Dayak identity but blurring it by giving their children Malay, Chinese and Javanese names to avoid mistreatment in the society. When Islam came to the land in 18th century (Zulfikar 2012), many abandoned the Dayakness completely by adopting the new religion and then identified themselves as Malays, an identity that equated with being Moslem and having a higher status, and, later, even with progress and modernity. The conversion is not always by their own choice, however, as government officials of the New Order’s Indonesia required them to choose one of the five officially recognized religions (Islam, Catholic, Protestant, Hinduism, and Buddhism). In areas where Moslem was dominant, they adopted Islam and also changed their names to Islamic names and used Malay as their first language (Yusriadi 2008, 66-69). I will come back to the discussion on this issue later.

This Dayak-turned-Malay group was the local rulers in the interior of West Kalimantan who established such small kingdoms as Sekadau, Sanggau, Sintang, Semitau, etc. Enthoven (1903) provides an excellent description of these kingdoms based on the reports produced by Dutch administrative officers stationed there. In the past, Dayak peoples paid some kind of tax for the protection from Malay sultanates in the coastal regions.

Li (1999) describes processes of dispossession have taken place in the upland regions of the post-colonial Indonesia. The uplanders undergo a process of marginalization as the dominant coastal and lowland communities label them as different. They are considered to “have failed to change, ‘develop’ or modernize” (Li 1999, 5). They are also culturally distinct and undergo a process of traditonalization through the codification of tradition or customary laws and the appointment of customary leader. Therefore, they are in fact under indirect rule. Consequently, borrowing the idea of Eric Wolf, the upland regions become “places with ‘different’ cultures but without history” which are “marginal, disorderly, traditional, and/or in need of ‘development’” (Li 1999, 9 & 11). This concept of marginality is equivalent to Gregory’s dispossession through Othering, which I will discuss later in the chapter.

To dominant societies, these regions are ‘new frontiers’ that have abundant natural resources and are still in wilderness state to be tamed and rationalized. They are
resource frontiers that can be put into the global capitalist circulation of resource extraction and commodity market (Tsing 2003). To enable this, the state employs enclosure project so that it can “appropriat[e] land, resources, and people both to turn into commodities and to ‘free’ – or create – a labor force to work and make capitalist accumulation possible” (Nevins & Peluso 2008, 3). Because of these, Dayak peoples have been experiencing dispossession.

West Kalimantan is currently one of the four provinces in Kalimantan (Indonesian Borneo). West Kalimantan is also a product of unification and pacification conducted by the Dutch. Up to the 18th century, several small states existed in the western part of Kalimantan. In 1822 the Asisten Resident (a middle rank government administrator) of the Dutch-created Westkust van Borneo, seated in Pontianak, carried out an expedition into the interior and made a number of contracts (a common form of treaty between local rulers and Dutch colonial government, known in Dutch as korte verklaring) on behalf the government of Netherlands Indies with the rulers of these states. A contract with the Pangeran (Prince) of Sekadau, for example, was signed on December 6, 1822 (Arsip Nasional 1973, 237-239). However, the Dutch concentrated its power in the coastal areas. It was not until James Brooke, a self-appointed English ruler, expanded his control into the interior of northern Borneo (the present-day Sarawak) that the Dutch paid much attention to the upper reaches of Kapuas River system (Irwin 1955; Wadley 2001). They sent new expeditions in 1844 and 1845 and renewed the treaties with the local rulers, mostly in 1847 (Arsip Nasional 1973, xxxiv-xxxvi). After that, the Dutch stationed a Controleur in Sanggau, west of Sekadau, which was also the seat of the king of Sanggau.

With these new developments, in 1848 the Governor General of the Netherlands Indies decided to create a province, called the Westerafdeeling van Borneo that was headed by a Resident (similar to Governor), to counteract British territorial acquisition in northern Borneo. This rivalry set off a massive cartographic project to map the interior of the province, especially after the Dutch and the British made a treaty in 1891 (Irwin 1955). The Netherlands Indies sent topographic surveying missions to West Kalimantan between 1886 and 1895 under the leadership of Captain J.J.K. Enthoven (Ormerling Sr. 1996). Later, Enthoven published a geographical and ethnographical account (Enthoven
This mapping project was an important phase in asserting internal territoriality by the colonial Netherlands Indies (Bryant, 1998), in which the state was able to control people and resources within the jurisdiction. The mapping projects both by Dutch and English carved out the island of Borneo into two colonial territories, which later divided into more administrative divisions within each territory. Within Westerafdeeling van Borneo, the Dutch established the boundaries of 19 landschap (self-governing territory) and one directly controlled land (Boven Kapoeas), which were controlled by Dutch officials with the ranks of as afdeeling, onderafdeeling and, including the landschap of Sekadau (Anon. 1896). This colonial project, however, had laid the border problems for the post-colonial states of Indonesia and Malaysia.

Apart from the identity issues and separation of families along it, the border problem has caused volatile ethnic tensions in West Kalimantan. In his Ganyang Malaysia (Crush Malaysia) project to annul the formation of Sarawak state as a part of Malaysia in early 1963, Sukarno administration helped the establishment of a resurgence group in Sarawak known as PGRS/Paraku. However, when Suharto took the power his administration outlawed the organization since the New Order regime was negotiating a peace agreement with the Malaysian government. Labeling the group as a spillover of communist movement resurgence, the central government sent out troops to put off the rebellion. Is so doing the the Special Force of the Indonesian Army used Dayak peoples, particularly those in western part of the province, to evict Chinese population from the rural areas which led into a massacre of Chinese (Davidson 2002). This event may have saturated the already volatile ethnic relations in the province, with the most recent social eruption occurred in late 1990s between Dayak and Madurese.

Another massive mapping project during Suharto’s New Order era had also disenfranchised Dayak people. With its main goal of identifying ‘emptiable spaces’ – spaces that are “devoid of socially or economically valuable artifacts or things that were intended to be controlled” (Sack 1986), Suharto administration produced maps of the natural resources throughout the country to enable its territorialization through the control of natural resources, primarily for commercial timber extraction, large-scale plantations, mining and creation of conservation areas. For that purpose in late 1960 the New Order
government granted logging concessions to foreign and domestic companies. The state claimed that lands were state property, while the Dayak peoples claimed that the concessions were on their customary lands which had existed before the Indonesia became a new nation-state. However, it was not until early 1980s that the Government of Indonesia began to map the forests and began to define state forestlands (*kawasan hutan*) and divided the areas into several functions. This created what Peluso and Vandergeest (2001, 762) call as ‘political forests,’ “lands the state declare as forests” as a means of “territorialization and legal framing of the forests and institutionalization of forest management.”

The final maps of the forestlands with signatures of governors, district heads, and heads of regional forestry offices were adopted as official forest maps known as Tata Guna Hutan Kesepakatan (Forest Land Use by Consensus) in 1984. This became the basis for forest planning in the provinces outside Java and Bali. With the issuance of Spatial Planning Act (No. 24 Year 1992), the Ministry of Forestry realigned the boundaries of state forestlands to conform maps of spatial plans, known as the process of *paduserasi*. The outcome of the process the Minister of Forestry issued a decree No. 259/Kpts-II/2000 to designate the realigned boundaries of state forestlands in West Kalimantan (see Figure 4.1). In the case of West Kalimantan both forest land use plans had enabled the government to grant commercial logging concessions and establish conservation areas.

In early 1990s the government launched a massive campaign on large-scale economic activities with its “Go East” policy to accelerate the development in its eastern provinces which had not obtained considerable attention from the central government. As part of this policy, the Government of Indonesia joined forces with four other states to develop a growth area called as BIMP-EAGA (an abbreviation of Brunei, Indonesia, Malaysia, the Philippines [cooperation in the] East ASEAN Growth Area). In Indonesia the growth area originally covered the provinces of North Sulawesi, East Kalimantan and West Kalimantan, but later it was expanded to cover 10 provinces. In its report Asian Development Bank (ADB) states that the goal of this growth area is “in short to medium
term, to ensure that EAGA is a major location in ASEAN for high value-added agro-industry and natural resource-based manufacturing, and high gradetourism, and in the longer term, to ensure that important non-resource-based industries are established in EAGA” (ADB 1996a, 136). Areas of investment proposed in the sub-region are agriculture, fisheries, forestry, tourism, and (manufacturing and processing) industry. The report further suggests three points of sub-regional cooperation, i.e., exploitation of economic complementarities (particularly natural resources and the difference of labor and land prices), private sector joint venture and foreign direct investment. Such approach did not occur until late 1990s when the timber stock has substantially decreased from years of exploitation. The government then started promoting plantation industries, particularly oil palm and timber estates.
The Government of Indonesia translated its ‘Go East’ policy into the development of Integrated Economic Development Zone (Kawasan Pengembangan Ekonomi Terpadu/KAPET) in a number of provinces. This policy aimed to develop new growth poles through private-led export-oriented investments. In West Kalimantan the designated areas are Pontianak (the provincial capital) and Sanggau district, where the former for services and the latter for resource based enterprises (Juoro & Syaikhun 1997). Since Sanggau is next to the border of Sarawak (Malaysia), the central government allocated the district for the development of EAGA. ADB (1996b) proposed the development of oil palm plantation in the district, which, it argued, can create 3 jobs per 10 hectares of oil palm estate and totally 30,000 – 50,000 employment within 3 years after the study (p. 16). In other words, the study projected at least 100,000 ha of oil palm plantation established by now. This meant that both the central and provincial governments had to provide new “lands” while the available lands were already inhabited by Dayak peoples. Moreover, since the province was considered as lack of skilled labor to anticipate EAGA initiatives, ADB’s study also proposed the importation of labor from other regions in the country.

The implementation of these plans led to massive dispossession of Dayak peoples. The Plantation Office of West Kalimantan reported that in 2011 the district governments in the province had granted 347 oil palm concessions (22 of which are foreign companies) covering an area of 3,548,845.75 hectares that exceeds the total allocated lands for all plantations of 3.5 million hectares.\(^\text{38}\) van der Vlist and Heringa (2010, 37) reported a different figure but found there were “over 4 million hectares of plantations and 860,000 hectares of logging concessions, 500,000 hectares of which overlap with indigenous territories in West Kalimantan.”

Another dispossession comes from another state territorialization process by containing the people in a given desa and homegenizing the governance. Although the Dutch put an effective control over the government matters, the king maintained his authority over the region including the collection of taxes through kampung leaders with

such titles as petinggi or temenggung. The colonial state's control over the population of the area was thus minimal. The Dutch nonetheless tried very hard to make Dayak settle permanently in one location and to transform families in longhouses into individual family economic units. They introduced Para rubber (Hevea brasiliensis) to fix people to certain locations, as the trees need maintenance and require tapping for rubber production. The Dutch also discouraged Dayak from living in longhouses and encouraged them to live in individual houses. To do this they used the oft-used colonial rationales of sanitation and safety, claiming that longhouses were not healthy and that they were prone to fire. However, it was not until the New Order regime was in power that Dayak abandoned longhouses.

To Dayak communities, up until 1980s, the longhouses served not only as living quarters but also as social, political and economic units that controlled a certain area (territory). The longhouse, built on poles made of logs under one roof, holds a row of domestic units (bilek or “apartments”) in which families live. Each unit has an open area in front, which serves as a common area, and a closed area for sleeping, cooking, eating and storage. To calculate the number of families in each unit is usually referred to as lawang (door).\(^39\) As a geopolitical unit the longhouse controlled an area that was determined by the farthest points where one could hear a gong. Such a longhouse, usually called kampung (kampong), was headed by an older male.

As the state entered the lives of the Dayak, the kampung became the smallest administrative units. In the 1960s the kampungs were considered to have the same status as desa in Java, and there were a large number in West Kalimantan. Until 1967 the title of kampung head remained petinggi, a title that had existed since the colonial time. When the New Order regime took power in Jakarta, the title changed to kepala kampung. Inspired by the Javanese model, the title was then changed again to lurah. Lurah supervised a number of kampungs.

The political landscape drastically changed after the New Order regime standardized the village governance. In 1979 Law No. 5/1979 on Desa Government transformed various indigenous village governance systems into a standardized desa

\(^{39}\) To understand about the life in a longhouse, one can read, for example, Heliwell (2006).
structure following the Javanese model (Zakaria 2000) as a means of modernizing village government (Rahardjo 1994). To enable the state to provide services, the Law required less populated village to merge with other village(s). For that reason, it required a desa to have had a minimal population of 2500 or 500 households. Following the law, the Minister of Home Affairs issued a regulation that required provincial governments to restructure villages. Later on, the Minister also required a village must have had at least 500 households within an area of 1,000-2,000 ha. Not all provinces did restructure villages, but West Kalimantan was among those that did. In 1987 the governor of the province issued decree No. 353 on Desa Unification for the Purpose of Re-ordering Desas in West Kalimantan (Penyatuan Desa dalam Rangka Penataan Kembali Desa di Kalimantan Barat), widely known as village regrouping. Jatiman (1995) indicates that an important reason of the rearrangement was to find the exact number of villages for subsidy scheme provided by the national government. During the regrouping period (1988-1989) a large number of kampung (indigenous Dayak villages) were clumped to form a new village as 81% of the kampungs had less than 100 families (Jatiman 1995, 205). The regrouping was conducted, however, by disregarding the existing geographical conditions and identity of the population. Hence, this process sharply reduced the number of villages from 4,686 to 1,362 (Jatiman 1995). Meanwhile, in the kabupaten of Sanggau, of which the Maap people was a part, the regrouping established six kelurahan and 227 desa out of 1,174 desas (Bagian Pemerintahan Desa Sekretariat Wilayah/Daerah Tingkat II Sanggau 1999/2000). The imposition of such uniformed structure systematically destroyed the existing indigenous governance systems as well as drastically changing territorial arrangement of the existing socio-political units (Zakaria, 2000).

In the eyes of nation-state, these processes are a crucial task to “bring order, control, and ‘development’ to upland regions, while deploying upland resources to serve national goals” (Anon.1999, xiv). The regions and their inhabitants are then exposed to state power through a process of territorialization to allow development projects taking

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40Peraturan Menteri Dalam Negeri Number 4 Year 1981 on the Formation, Separation, Unification and Elimination of Desa (Pembentukan, Pemecahan, Penyatuan dan Penghapusan Desa)
41Instruction of the Minister of Home Affairs No. 46 Year 1984.
42This includes the desas that are now part of Sekadau district.
place (Li 1999, 11-20). This process allows the state to claim and order its territory (Vandergeest 1996; Vandergeest & Peluso 1995) using the so-called scientific management approach. Spatial planning is central in this process to produce zonation for different spatial uses. Following Gregory’s dispossession through spatializing, I call this as spatializing through territorialization (Pramono 2001). This process makes a way for the state to launch development projects. On these rationalized regions it grants concessions for resource extraction (logging, mining and plantation), build infrastructures to mobilize and coordinate people and goods, and establish conservation areas. All of these will feed into the global market through the production of resource-based commodities and, recently, storage of genetic resources and carbon.

Although not as massive as those in settler colonies, dispossession through naming (Gregory 1994) did occur in West Kalimantan. The domination of the Malays in local politics in the past led to changes in Dayak place names, particularly through adoption of the Malay pronunciation of place names as the official place names. There are some examples, Sungei Ijo in Sekadau river basin becomes Sungei Hijau. Karakng Botonkng, another place name in the same river basin, was simplified into Karang Betung. Or, Sahapm, a kampung in Landak district, becomes Saham. Such changes of place names contributed to the loss of identity of some extent among Dayak communities on their own kampungs (Anam 2009).

However, spatial dispossession is only one of several types of dispossession. Calling them “systematic destruction” (penghancuran sistematis), Djuweng (1998) listed six types of dispossession created by development: formal education, introduction of ‘alien’ religions particularly Islam and Christianity, cultural domination, ruler-oriented laws, invasion by international capitalism, and information and technological revolutions. Consumptivism is seen as the root of the problem, according to Bamba (1998; Bamba 2000), who elaborated the dispossession: a. the state adopted capitalist economic system that promotes economic growth and free competition while undermining sustainability and solidarity; b. the introduction of sophisticated media technologies in influencing values and desires; c. formal education which is not geared to local needs and alienates students from their cultural roots; d. destruction of longhouses; e. the introduction of the
world’s major religions that replaced indigenous religions; f. a legal system that ignores people’s wisdom and customary rights (Bamba 1998, Bamba 2000). Longhouses were the cultural centers for Dayak as nearly all community activities took place in them. But development planners considered them barriers to modernization (Layang and Kanyang 2005). Under the guise of these “civilizing missions,” Dayak have been alienated from their surroundings and cultures, particularly through the imposition of individualistic notions and detachment from the nature.

This systematic destruction has many consequences for Dayak, including these key ones. First, under customary land tenure systems, legal documents for ownership were not necessary as tenure was locally acknowledged and enforced through the adat institution. But, because untitled lands do not have legal protection and are outside the legal system, this leads to “legal landlessness” (Colchester 1995), dispossession by legal definition. Furthermore, state officials consider swidden agriculture inefficient and an inferior farming system as opposed to sedentary, intensive agriculture. Thus swidden lands are targeted for commercial logging and plantation activities, which are seen as more productive.

The preference over large-scale resource extraction has led to “land grabbing” (Borras & Franco 2012), the appropriation of large tracts of land from the local communities for commercial purposes (particularly plantations). Indonesia is currently experiencing a new wave of land grabbing to feed the world demands on vegetable oil and biofuel. Virtually all supplies come from oil palm plantations. This is the very reason that the oil palm plantation increases rapidly in 20 years. The current administration of Susilo Bambang Yudhoyono even proclaimed to make Indonesia as the largest palm oil producer in the world by 2015. In West Kalimantan alone the total area of oil palm concessions was 2.1 million ha (2011), around 13% of the province. This land-hungry enterprise has created land conflicts in Sumatera and Kalimantan, where most plantations are expanding, and slowly moves to Sulawesi (Celebes) and Papua (western part of New Guinea island). The magnitude of the conflicts is outstanding. By 2007 the National Land Agency received nearly 7500 complaints of land disputes related to oil palm industry.
The Indonesia’s National Commission on Human Rights reported that in 2010 40 % of the reports on human right violations were related to oil palm plantations.

Another potential of spatial dispossession comes from the Reducing Emissions from Deforestation and Forest Degradations (REDD) scheme. With its main goal of trading carbon emissions from large emitting countries to tropical forest countries, the scheme is seeking areas where good forest stands can be conserved to offset the carbon emissions. The problem is the largest, intact forests in Indonesia are generally on indigenous lands. Meanwhile indigenous peoples have no tenurial security over these lands. West Kalimantan, which still has large forest tracts, is a target province for this scheme. Two foreign aid agencies, USAID and GIZ, have climate change mitigation projects in the province as do international conservation organizations such as WWF and FFI (UK-based Flora and Fauna International). Responding to this development, AMAN introduces a slogan ‘No rights, No REDD’ to assert that no negotiation on REDD scheme will take place without the recognition of indigenous rights.

As forests are central to Dayak life, serious land disputes have been rampant. To date several violent conflicts with logging and plantation companies have occurred including the burning of company’s facilities. In-migration of other ethnic groups has shown very volatile. The violent conflicts took place in late 1990s between Dayak and Madurese which occurred twice, in 1997 and 1999 causing causalties to both groups. In addition to the weakened state after the fall of New Order, resource conflict was a major factor in this regard (van Klinken 2008).

All of these processes transform the lives and livelihoods, in fact the cultures, of Dayak peoples and lead to identity construction in relations to the external power and internal changes, including the resistance to that power. The resistance grew from sporadic, individual actions to organized collection actions and social movements.

4.3. Continuity and Change: An Example from Mahap People

4.3.1. Ethnic Politics and Decentralization

The Maap is a group of Dayak who live along Mahap River, a tributary of Sekadau River. Administratively their land lies within the kecamatan of Nanga Mahap.
The kecamatan has a relatively undulating terrain with Mount Biwak as the highest peak in their area. The hills and mountains have water springs that become small streams flowing into Sekadau River, which runs northward to Kapuas River.

Nanga Mahap is the southernmost kecamatan\(^{43}\) in Sekadau district that lies in the headwaters of Sekadau River, a tributary of extensive Kapuas river system. The town of Nanga Mahap is 55 km from the city of Sekadau. The kecamatan covers an area of nearly 120,000 ha. The area has undulating terrain with many small hills (Mp: mungguk), and has two peaks (Mount Biwak and Mount Raya). As in most other upland areas in Kalimantan, people settle along the rivers and streams and practice swidden agriculture in hilly areas. However, rubber agro-forests dominate the landscape. Due to this and the fact that large forest stands still exist in the area, the kecamatan is designated by the district government (in its spatial plan as stipulated by its District Law number 10 year 2006) as the conservation zone for the district. However, oil palm plantations are expanding into the forests, rubber gardens and dry rice farmland (including the swidden fallows) to create these monocultural plantations.

The population of the kecamatan was nearly 26,000 (BPS 2011), which is mostly Dayak. Alloy, Albertus and Istiyani (2008) reported that the Dayak groups identify themselves as Maap, Mentukak, and Ulu Sekado, as well as Taman Sekado, Koman, Menterap, and Kerabat. The latter groups moved here, particularly from the kecamatan of Nanga Taman in the north. As with other Dayak groups, their names are based on the names of the rivers along which they live. Each group has its own language, though they can understand each other. They are generally swidden farmers with dry rice as the main staple. Therefore, rice gardens and fallows dominate the landscape. In the past Dayak groups moved frequently, but with increasing state control they now tend to settle, especially as they need to attend their rubber gardens. It is the case also with the Maap people.

Based on oral histories, Alloy, Albertus and Istiyani (2008) speculate that the Maap might be the descendents of the ancient group who lived Tamputn Juah (now a

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\(^{43}\)Kecamatan is an administrative unit under kabupaten headed by camat, an appointed civil servant position, while kabupaten is an administrative unit under province, headed by an elected Bupati.
tembawang near the present-day Indonesian-Sarawak border gate of Entikong) around 200 BC. They left the area during the last of three waves of migration and moved a couple of times following the tributaries of Kapuas and Pawan rivers. Legend says that their ancestors settled in Labai Lawai (an area downstream of Kapuas River, near present-day Tayan) and Laman Pupuk (a tembawang at the bank of Kenyabur River – a tributary of Pawan river system – just south of Nanga Mahap). The first group of the current Maap settled in the banks of Mahap River a few hundred years ago, but not before 14th century when a group of Buddhist monks inscribed a stone with prayers (Utomo 2007). More movement occurred, some groups speaking different languages (such as Mentukak), but eventually they adopted the same language and same set of (with some small variations) customary law. The Maap language shows a strong Malay influence. The population grew slowly. In the 1890s Enthoven (1903) recorded it as being 500 living in 100 households. At the turn into the 21st century the speakers of the Maap language numbered 2626 (Alloy, Albertus et al. 2008).

Maap, as with most other Dayak peoples, are patriarchal society, with a strong separation of gender roles in public and domestic lives. In public meetings there is spatial separation of seating. In decision making processes usually only elder males can speak. Many adat rituals are also exclusively for men. At home when guests visit a house after preparing and serving the food, women let the men and the guests to eat first. In important public adat ceremonies men who serve the food under a very complicated set of rules. Men also often prepare food and other necessities for ceremonies.

Virtually all Maap people are Catholic. They adopted the religion only in mid 20th century. Prior to that, they practiced their indigenous belief that oriented toward their ancestors and Daté Petaré (the Supreme Being). Catholic missionaries came to ‘introduce’ Christianity and asked the people to abandon their ‘animistic’ belief and ‘bad’ culture. The first Catholic priest came to West Kalimantan in 1890, but only began to

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44 Several Other Dayak groups also have legends that mention these two former settlements as the routes of migration of their ancestors.

45 The inscription lies in Pait where the Maap people migrated to from Sebabas. After they found it, now referred to as Batu Batulis, they considered it as sacred. The reason why Buddhist monks were there, and how they got there, merits an in-depth research. A replica of the monument was built on the ground of the Provincial Museum in Pontianak.
Figure 4.2. Migration of Dayak groups in the districts of Sanggau and Sekadau
(From: Alloy et al. 2008: 50)

build a parish in Sejiram (now part of Kapuas Hulu District). Through a process of
acculturation, Catholicism has a strong hold in Dayak peoples. One important reason is
that the Catholic priests allow the peoples to continue practicing their rituals, while
prioritizing Catholic values and practices, and to consume pork as an important
component of their diet and rituals. With such nature, Catholicism is then adopted as a
part of Dayak identity. I will discuss this again later.

As discussed earlier, many Dayak converted into Islam. They detached
themselves completely from their Dayak identity by calling themselves as senganan,
sengonan or urang laut (Pasti 2003). By being Senganan, they abandon their Dayak
identity largely due aspects of Islam, particularly the consumption of pigs and tuak (rice
wines). They also only speak Malay in its local dialect in order to be identified as Malays
(Yusriadi 2008). This adoption also increases their social status within the society and
creates the notion of superiority over other Dayak. To differentiate themselves from
Dayak groups they speak the Sekadau dialect of Malay. In daily conversation a Dayak
who converts to Islam is called as ‘Dayak turun Melayu’ (Dayak going down to Malay).
Such a phrase refers to the fact that Malay communities tend to inhabit downstream areas, whereas Dayak groups inhabit the hills.

Although they are siblings, the relationship between Senganan and Dayak has been bitter. When talking about Senganan, a Dayak person usually refers to the behavior of the Senganan rulers in treating the Dayak peoples, including stories of sexual harassment to Dayak women. The Senganan calls a Dayak person *orang darat* which has a derogatory meaning, probably similar to the term ‘hillbilly’ in the Appalachian region of the eastern United States.

This deep ethnic division leads Dayak and Senganan groups to separate themselves territorially, so that they build a *kampung* based on this identity. In Dayak *kampung* one can expect to see pigs wondering around, something one cannot find in a Malay *kampung*. In one case, the boundary between the *kampung* of both groups is an elementary school. Out of 34 *kampungs* in the *kecamatan* of Nanga Mahap, there are seven *kampung* of Senganan. The town of Nanga Mahap, as the capital of the *kecamatan*, has mixed population. Despite this identity divide, both groups practice swidden farming and plant rubber.

Apart from these indigenous groups, there are some other ethnic groups who have migrated to the *kecamatan*. The first is Chinese community, mostly live in the town of Nanga Mahap. Enthoven (1903, 700) reported that Chinese traders came to Sekadau area in early 19th century in search of gold. Although they are small in number and concentrated in the town of Nanga Mahap, this group controls the economy of the area. They sell daily goods and buy sheets or lumps of Para rubber (*Hevea brasiliensis*) and, when in season, illipe nuts. They have loyal suppliers to whom they often provide funds and goods. *Reformasi* era resulted from the fall of Suharto allow them to enter politics, even running for public offices. The other groups of migrants are Javanese and Sundanese from the densely populated island of Java. These people came as the

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46 Illipe nuts are highly valuable species collected from 15 species of *Shorea* spp. (Dipterocarpaceae), mostly endemics to western part of Borneo (West Kalimantan and Sarawak). They contain edible oil that have physical and chemical properties very similar to cocoa butter, so that they can be used in cosmetics, confectionery, and food (Peters 1996).
participants in the government-sponsored transmigration program or as teachers for the missionary schools built in the 1960s and 1970s.

This description of different ethnic groups shows the importance of ethnic politics that shapes the politics of West Kalimatan, from the villages up to the province (see Tanasaldy 2012). In many ways this politics affects much of the ongoing wave of decentralization in the province – which has swept through the country primarily with the creation of new provinces, districts and municipalities. The creation of new territories is expected to ease public services to the population and to induce development in the areas. However, in many cases the ruling elites of the colonial period attempt to capture this political space in order to resurrect their power. Furthermore, the new political space has become an arena of competition among local elites in rent seeking (both from regional budgets and permitting) as well as in recruiting and placing civil servants. Different ethnic groups attempt to capture this newly-created opportunity. Dayak and Chinese have entered the politics. The current governor of the province is a Dayak person, whereas his vice governor is a Chinese. They just secured the second term of office through an election in September 2012. Most of bupati (district heads) are also Dayak. This ethnic group holds other key government positions as well and has a substantial growth within the body of civil servants.

The Sekadau district, of which the kecamatan of Nanga Mahap is a part, was established in 2003 by carving out the eastern part of Sanggau district and using the very boundaries of the landschap of Sekadau of the colonial period. The district was created with an expectation to improve public services and to give it “an opportunity in using and developing local potentials.” Its population demands better infrastructure (particularly road) and improved access to health service and education. They also want to have better welfare. As other new regional governments do, the district government intends to capture regional incomes. As small-scale agriculture is its main economic activities, the government tends to adopt agricultural enterprises of larger scale to get the significant incomes.

47 Act No. 34 Year 2003 on the creation of the districts of Melawi and Sekadau.
When it was still part of the Sanggau district, the Senganan filled most of the government positions, whereas only small number of Dayak persons could reach high ranks. The new district has changed much. The first bupati (Simon Petrus), who was elected in 2005, is a Dayak person with his vice a Chinese (Abun Ediyanto). The contender was Stefanus Masiun and Petrus Lansang (two Dayak activists). Along the way, they did not get along. So when Simon Petrus ran for the second term of office in 2010, which he succeeded, he chose a running mate of a Dayak descent (Rufinus). It should be noted that the Simon Petrus is a Dayak Mualang, from the northern part of the district, whereas his running mate is from Dayak Mentukak (in southern part of the district). Two out of five candidates had compositions of mixed ethnicities in order to win, including Masiun (an important figure in Pancur Kasih) who teamed up with a Senganan. Therefore, ethnic politics is central in the elections of public officials.

At the local level, identity politics and rent seeking are also crucial. Several kampungs want to have their own desa to assert the identities of their population and to capture government subsidy to the desa known as Alokasi Dana Desa. Every year the district government allocates funds as much as IDR 20 million to the desa which can be used at the latter’s discretion based on their annual plan and budget. Using an example in the kecamatan of Nangan Mahap, I want to give attention on the establishment of the desa Tembesuk in early 2012, which carved out the relatively large desa Karang Betung (Karakng Botokng). Kampung Tembesuk is a Senganan kampung which shares its territory with Sungai Pandak, a Dayak kampung. Together with Tanyong Belanger (Dayak kampung) and Suak Mansi (Dayak kampung, previously a part of desa Sebabas), these kampung become a new desa Tembesuk. This new desa shows an assertion of identities and, at the same time, a pragmatism in building coalition to capture government subsidy. This is actually a rare case, because in most cases the Senganan wants to have a separate desa from the Dayak.

Another impact of decentralization is the delineation of desa boundaries. A regulation from the Ministry of Home Affairs (Peraturan Menteri Dalam Negeri No. 27

48 This step was taken probably because the Dayak groups from the southern part of the district felt that the Simon Petrus only gave attention to the northern part of the district.

Year 2006) requires each desa to establish the boundary of its jurisdiction using a cartographic method and erects concrete posts along the boundary. Most desa still do not have this. This can become a serious issue due to resource conflict and identity politics, especially since the resources are scarce and land appropriation by large corporations become apparent.

Another important phenomenon is that the inhabitants of a given kampung maintain their identity although they currently settle beyond the boundary of their kampung. This is the case with kampung Nanga Ensayang. The inhabitants of the kampung migrated recently from kampung Karakng Botokng to the lands under the jurisdiction of Ketapang District, the southern neighbor of Sekadau District, and the lands claimed by Krio people. The Krio people argued that the areas where the streams flowed into Sekadau River belonged to the peoples in Sekadau District, whereas the areas where the streams flowed into Pawan River belonged to the peoples in Ketapang District. Nonetheless, the villagers of Nanga Ensayang insisted to be part of Karakng Botokng which created tension with the district government of Ketapang and the Krio people. Negotiation is still under way at the time of writing.

4.3.2. Agricultural Transformation

Dayak peoples are known to be subsistent farmers practicing swidden cultivation, or hunter-gatherer as for Punan and Penan peoples. Nonetheless, they have been engaged in trades of forest products and minerals for centuries, particularly resins (damar), gutta percha, and illipe nuts (e.g., Dove 1994, 2011; Padoch & Peluso 1996; Wadley 2005). They have thus created landscapes that are connected to the global market. However, the magnitude of market-induced landscape transformation is relatively small. With such condition and based on my observation among the Maap people, a typical Dayak landscape in West Kalimantan in the past might have been consisted of a core settlement (kampung; Mp: kampokng), swidden areas (both those in active use and those in fallow period; ladang [Mp: umé] and bawas [Mp: tayak] respectively), forest gardens (tembawang, Mp: tema’akng), gardens of illipe nuts, and communal forests.
The greater magnitude of landscape transformation started when modern institutions with a strong notion of capitalist enterprise development entered into the lives of Dayak peoples. The Dutch started it by introducing Para rubber to feed the global market. Much larger transformation took place when Suharto’s New Order regime granted hundreds of logging concessions. When the timber boom ended due to the lack of standing volumes of economically important timber species, oil palm industry came in by using mostly the logged over areas. I want to focus this landscape transformation, which then leads to agricultural transformation, in the kecamatan of Nanga Mahap.

The lives of Maap people and other Dayak peoples in the kecamatan of Nanga Mahap center on rice farming, largely using swidden farming techniques. This centuries-old farming practice is a product of the adaptation to the poor land conditions, because in general, Bornean soils lack of important nutrients for edible plants. Swidden farming involves an intricate web of knowledge systems, property relations, and reciprocity (see Gönner 2002). It follows an annual cycle of farming year that starts at the beginning of dry season (usually in May) with the clearing of new farming plots and ends at the end of rainy season (some time in February) with the harvest (see Table 4.1). The slash and burn phase is done individually as it is a part of land claim process, but planting and weeding are group work that every family in the group gets a turn of this reciprocal work. They use local rice varieties with no fertilizers. But increasingly more people use herbicides to eliminate the weeds. During the planting phase, not only rice is planted but also peanuts, eggplant, other vegetables, and Para rubber (*Hevea brasiliensis*). The last is planted in rows, often not in regular intervals, and is left alone to grow without much maintenance. After the harvest, a series of *adat* ceremonies (*gawai*) are conducted, starting with eating newly harvested rice (Mp: *padi nyemaru*).

Para rubber was only introduced by the Dutch at the beginning of 20th century through the establishment of corporate-owned plantations (Dove 1994). Ozinga (1940)

| Table 4.1. A typical seasonal calendar of Dayak peoples: an example of Maap people |

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50 Apart from introducing rubber to smallholders, the Dutch government granted concessions to companies during the first decade of the 20th century. See
<table>
<thead>
<tr>
<th>Jan</th>
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<tr>
<td>Rubber tapping (menoreh) ♀</td>
<td>Rice harvesting ♀</td>
<td>Rice harvesting ♀</td>
<td>Adat ceremony (Gawai)</td>
<td>New farming year (Nyapat taun)</td>
<td>Gawai</td>
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<tr>
<td>Rice harvesting ♀</td>
<td>Rubber tapping (♀)</td>
<td>Rubber tapping ♀</td>
<td>Planting mungbean and peanut (darakng kacang) ♀</td>
<td>Rubber tapping</td>
<td>Rubber tapping</td>
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<tr>
<td>Hunting (Mongkal) ♂</td>
<td>Easter celebration</td>
<td>Rubber tapping</td>
<td>Fuelwood collection</td>
<td>Bush clearing</td>
<td>Transporting logs</td>
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<tbody>
<tr>
<td>Land clearing (bush clearing &amp; tree cutting)</td>
<td>Burning</td>
<td>Weeding (ngurutn) ♀</td>
<td>Weeding</td>
<td>Weeding</td>
<td>Rubber tapping</td>
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<tr>
<td>Hunting ♂</td>
<td>Hunting ♂</td>
<td>Logging ♂</td>
<td>Logging ♂</td>
<td>Logging ♂</td>
<td>Logging ♂</td>
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<tr>
<td>Rubber tapping</td>
<td>Rice planting (Nugal)</td>
<td>Nyapat pagaitin (ceremony held at the end of rice planting and the beginning of weeding periods)</td>
<td>Planting mungbean and peanut (darakng kacang)</td>
<td>Rubber tapping</td>
<td>Weeding</td>
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<td></td>
<td>Rubber tapping</td>
<td>Rubber tapping</td>
<td>Rubber tapping</td>
<td>Praying for the dead</td>
<td>Christmas</td>
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<td>Maize planting</td>
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Note: ♀: female; ♂: male

reports, Para rubber was introduced to West Kalimantan around 1905 as a response to the growing global market of the commodity. By 1920 the local populations planted the new commodity along the coastal areas, along Kapuas river and its major tributaries in Upper Kapuas, Upper Melawi and Upper Pinoh as well as some areas in Ketapang (Ozinga 1940, 329). Not long after its introduction, this species has become embedded into the lives of Dayak in West Kalimantan, and has become a part of their agro-forestry system, similar to forest gardens (tembawang). Recently, clonal rubber varieties (karet unggul) were introduced since it could be tapped at the age of five and produced more latex than the local varieties (karet alam). Although rubber production increased, the new varieties demanded no competitors around resulting monocultural plantations and heavy inputs of pesticides and chemical fertilizers.

If rice farming is mainly for subsistence, rubber is to generate cash so that people can participate in the market economy. During my research in 1997 the commodity caught a considerably good price (IDR 10,000). The price fluctuates following the global market. It plummeted during the 2008 crisis but went up again slowly, but with the crisis in Europe recently it had another downfall. Nonetheless, people are more attracted to plant rubber trees on their lands making it a dominant feature in the landscape, whereas lands for rice farming are shrinking. A transformation Dove (1996) calls ‘rice-eating rubber’ to show the significant impact of this lucrative enterprise to the agricultural transformation in Indonesia.

The income from rubber was significant during my research period. Because of this, a number of credit unions (CUs) competed with each other to get members (customers). In 2007 seven CUs had a branch (tempat pelayanan) in the town of Nanga Mahap: Nyai Anta, Semandang Jaya, Semarong, Keling Kumang, Lantang Tipo, Lantang.

51 Credit unions in West Kalimantan are among the largest and fastest growing CUs in the country. Since Pancur Kasih established a CU in 1987 in Pontianak, the number of CUs in the province has grown dramatically, particularly in 1990s when the Dayak identity movement grew significantly. Pancur Kasih, as the prime mover of the movement, has promoted CU as means economic empowerment to achieve people’s self reliance of marginalized communities, particularly Dayak peoples. It also developed a distinctive model by promoting kapitalisasi (capitalization). This scheme allows a member to increase his/her saving by borrowing money from CU to be deposited back into the saving account. The member will pay back based on his/her ability.
Manteare, Pengiris Midop, and Canaga Antutn. I use the example of CU Nyai Anta to illustrate why the kecamatan was so attractive to credit unions. In the dusun (hamlet) of Manjang alone 47 rubber farmers generated an income of IDR 12 million per month in May 2007 (Heribertus 2007). Between January and March 2007 the CU captured IDR 61 million into its assets. As the oldest CU in the kecamatan (established in 2001), CU Nyai Anta grew rapidly. In 2004 its Nanga Mahap branch had 2100 members with an asset of IDR 3.7 billion. By May 2007 it had 2,540 members with an asset of Rp 5,662,523,429 ($629,170). Another CU, Semandang Jaya, also benefited from the growing economy in the area. In April 2007 it had nearly 3000 member with an asset of nearly IDR 8.5 billion. By 2009 the asset grew to IDR 23.4 billion generated from more than 5200 members. If most CUs flourished, CU Pengiris Midop failed in 2008. These micro-financial institutions provide capital to the members who mainly use it to buy rubber gardens and motorbikes (Heribertus 2007). The number of members borrowing money to purchase motorbikes was high. In 2006 CU Nyai Anta alone had 806 lendings for this purpose (Enso 2007).

Apart from these major economic activities, Dayak also have other economic activities. Men hunt wild game and conduct small-scale logging for their own needs. However, due to the scarcity of timber, some villagers do sell timber commercially, especially ironwood (Euderoxylon zwageri). This brings a high price. Meanwhile, many young women in the kecamatan of Nanga Mahap went to Sarawak or Singapore to work as domestic workers, many did not have official working permits. At the time of my research, in kampung Pait there, for example, some 20 women were engaged in this scheme. Another economic activity is the collection of highly valuable illipe nuts (known locally as tengkawang or engkabang) when the fruit masting season of Shorea spp. occurs. This commodity gives a significant additional income to the communities (Peters 1996).


As with situation of most female migrant workers in Malaysia, painful stories also occur in the kampung. Three of them came back bearing children, whereas one had never sent any news for eight years.
Figure 4.3. State forestland in the kecamatan of Nanga Mahap (Map: Lebah Nusantara) (green: protected forest; light brown: production forest; light purple: limited production forest; brown: convertible production forest; blue: land for other purposes/agricultural land).

As the state imposed its territoriality in the kecamatan of Nanga Mahap through the designation of state forestlands (Figure 4.3) and concessions, legally local communities have limited access to the forests, whereas the state has, at least in theory, full control, if not ownership, over those lands. This imposition created disenfranchisement within the communities.

During the timber boom in the 1970s up to early 1990s, on the southern part of the kecamatan that were categorized as production forest and limited production forest, the Ministry of Forestry granted logging concessions. Commercial logging companies (including PT Erna Djulaiawati between 1990 and 1994) actively operated in the kecamatan leaving large logged-over areas. When the boom ended, the government granted concessions to oil palm companies in areas categorized as Area Penggunaan...
Lain (areas for other purposes), the government issued oil palm concessions. The first oil palm company, PT Kalimantan Oleo Industry, appropriated lands in the mid 1990s and started planting, but then collapsed in 2002, abandoning large tracts of cleared lands. Later, the concession was granted to PT Rimbunan Jaya Hijau. In 2004 the interim Bupati granted a 28,000 ha concession covering the desa of Nanga Suri, Sebabas and Teluk Kebau in the kecamatan of Nanga Mahap as well as Nanga Engkulan in Nanga Taman to PT Arvena Sepakat, a subsidiary of Incasi Raya Group based in Padang (West Sumatera). When I first went to Nanga Mahap in January 2007 the company had appropriated lands in Nanga Suri. In November 2009 it had planted the lands further east, close to the kampung of Sebabas. Therefore, the central and district governments gave a red-carpet treatment to the corporations.

On the other hand, the community was not only dispossessed, but also suffering from another blow of discrimination. When in 2011 the community of Pait (my main research site) planned to build a junior high school, for example, the district government cancelled the plan since the proposed site was classified under protected forest (hutan lindung), a category that does not allow logging and forest conversion within it. In fact, the whole territory of the kampung is a part of protected forest. The community fought back and kept on trying to implement their plan. For them, the school was meant to ease their financial burdens in sending their children to junior high schools in the town of Nanga Mahap and, at the same time, allowed them to monitor the children directly.

The existence of oil palm plantations also created conflicts within the communities. Some groups were happily accept the plantation as they believed that it could provide them with facilities, particularly roads, and secured incomes. Some other groups are against the plantation scheme with a fear of loosing their lands, incomes and identity. Some of them learned about the negative impacts of oil palm plantations, which is monoculture in nature and requires heavy inputs of chemical fertilizers and pesticides, from the campaigns carried out by the environmental groups and indigenous peoples’

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54 An interim Bupati does not have the authority to take legally binding acts.
55 In 2011 almost all dusun had an elementary school. Meanwhile there were five junior high schools (two in the town of Nanga Mahap, three others in a desa each). A high school was just recently built. During my fieldwork the nearest high school was in Nanga Taman (north of the kecamatan).
organizations. However, the companies often use community leaders to influence their fellow villagers to sell their lands for the plantations. The companies usually adopt a nucleus estate scheme, in which the companies divided the plantation into a nucleus estate directly under their control and a large number of smallholdings (known as plasma in Indonesia) managed by farmers. From a given land a family sold, the companies usually asked for 80% of the land for nucleus and 20% for the family. However, many community members assumed that they could recover their land rights after the concession period ended. Meanwhile the companies applied the National Land Agency to issue the rights to land use (*hak guna usaha*), a title that converts all lands under state control, which they later used in the application for credits from the banks. The smallholders had to participate in paying the debts. The local communities thus suffered from a number of dispossession in the existing oil palm plantation scheme, imposed both by the state and the company.

Despite the imposition of state forestland status, the government does not have full control of the ‘political forests.’ The small-scale logging of ironwood – which did not have formal licence – was rampant. In kampung Pait every day I saw a group of teenagers carried ironwood beams on their shoulders to be piled up at the ground of a local trader’s house. I counted the beams could be up to 70 pieces per day. This logging activity could most likely cause a recent major flood in the *kecamatan*, since the worst hit desa were Sebabas and Karakng Botokng where most logging activities occurred.56

Until the late 1990s the road system to, and in the *kecamatan* of Nanga Mahap, was very poor. To travel from *kampung* to *kampung* and to Sekadau (the nearest trading town, which was the hub for the watershed and is now the capital of the newly established *kabupaten*) people had to travel on foot using these trails, or travelled by boat. Today most settlements can be reached by motorbike, while cars can access the town of Nanga Mahap and a small number of other settlements. The provincial government is constructing a paved road from Sekadau, primarily to facilitate the development of oil palm plantations. The absence of road infrastructure was a main reason for some

communities to accept oil palm plantation schemes on their lands, because the company promised them to build roads as well as educational and health facilities. The company, however, did not always meet the promise for the latter. Due to this development, boats are no longer popular as a means of transportation.

4.3.3. Village Governance

In colonial time the area of the kecamatan of Nanga Mahap was a part of the self-ruling region (zelfbestuurende landschap) of Sekadau. The smallest of unit of governance was a kampung that was mainly a longhouse. The leader of a longhouse was a petinggi. Enthoven (1903) reported that there were several kampung in the area that is currently under the jurisdiction of the kecamatan of Nanga Mahap, but he does not mention the number. The topographic maps produced by the survey he led showed the distribution of the kampung. Many of the current kampung did not exist on those maps. When the kecamatan was formed in 1965, there were 35 kampung. After the regrouping the number of desa was reduced to eleven new desa (Nanga Mahap, Nanga Suri, Cenayan, Sebabas, Karang Betung, Batu Pahat, Lembah Beringin, Landau Kumpai, Teluk Kebau, Landau Apin, and Tembaga).

When referring to the new desa (desa gaya baru) residents differentiated two terms: kedesaan for its territory, and desa for the government structure (village head and the cabinet). The kampung where the kepala desa (head of desa) resides usually serves as the center (pusat pengembangan) for the whole new entity. Therefore, the name of that kampung usually became the name of the new entity. The kampung of the past (desa gaya lama) are now called dusun. In most cases each kampung became a single dusun, but sometimes two kampung were merged to form a single dusun. The current number of dusun in the kecamatan is 34.

There was a stark difference between the old and new systems, apart from village administration matters. In the past the village government was responsible for all socio-political, cultural and judiciary functions. As it was relatively autonomous it controlled all matters in the community. With the introduction of new desa governance, there was a separation between village government and adat matters. Desa heads were
only responsible to the camat (head of kecamatan) and dealt only with administrative and government programs. A separate adat structure now dealt with adat matters. At the desa level there was a kepala adat (or other title), and at the dusun level a menteri adat (or other title).

Village governance changed over time. Maap people live primarily in ten kampung: Sebabas, Riapm Batakng, Setugal, Pulau Baak, Kamoyuk, Batu Koran, Pait, Manjang, Sungai Pandak, and Sungai Mayong. When kelurahan was formed, these kampung were placed in two kelurahan: Sebabas and Pait. Then after regrouping, the kampung belonged to three desa (Sebabas, Nanga Suri and Karang Betung) in the kecamatan of Nanga Mahap. The people are concentrated in Sebabas which has six dusun. However, as the regrouping process was carried out only based on population, the geography of the new desa was confusing. Two phenomena deserve attention. First, Manjang which is much more accessible to Pait became a part of Karang Betung. Second, Suak Mansi, a settlement in the slope of Mount Biwak, is a part of Sebabas, yet it is located in the middle of the desa of Karang Betung. This was because the inhabitants of Suak Mansi were still registered as the inhabitants of Sebabas from where they had originally lived. Therefore, Suak Mansi is an outlier of Sebabas (see Figure 5).

To manage the desas, the district government of Sanggau – of which the kecamatan of Nanga Maha was a part – produced sketch maps which prominently feature rivers (Figure 4.4). Such maps strongly show the influence of Dayak spatial literacy which strongly emphasizes river system as part of their spatial knowledge. I will turn to this particular issue in Chapter 5 by using the example of the Maap people.
4.4. Dayak social movement: the story of Pancur Kasih\textsuperscript{57}

As an image of God, all human beings have the same status. They are able to cope with their own problems and make their lives more respected. Positive potentials of such uniqueness need to be developed. Nonetheless, there is a crucial factor in this self development, namely \textit{independence within the realm of solidarity}.

(Mecer and Florus 1998, my translation)

Different from other social movements, indigenous social movements are “to preserve some politicalcultural space to remain different” (Hall & Fenelon 2008, 2). The movements do not only about resistance, but also revitalization of indigenous cultures and governance. They cover the issues of local autonomy, land tenure, community

relations, and socioeconomic ‘development’ using decolonization strategies (Fenelon & Hall 2008). This is also the case for indigenous resistance in West Kalimantan. In this dissertation I emphasize the important of agency (cf. Turner & Caouette 2009).

Realizing the threats created from export-oriented economic development initiated by the state, Dayak peoples started to organize and increase their awareness of identity. However, due to a series of inferiority, oppression and marginalization, Dayak peoples sought patrons that could help them escape from the misery. Alqadrie (1994) suggests that, due to their eschatological expectation, Dayak people seek ‘messiahs’ that can lead them to a better life. Now, he continues, the Dayak find that formally educated Dayak people can take the role. Similar to that, Castells (1997) observes such movement is usually lead by a charismatic leader, which he calls ‘the Prophets’ (p. 361). Yayasan Karya Sosial Pancur Kasih (YPSPK), based in Pontianak, can be considered to take that position as it was founded by a group of formally educated Dayak to help improving the lives of Dayak people. Initially the movement occurred locally, but gradually built up into a province-wide movement.

In the early 1990s scattered collective actions began to fight against dispossession. Road blockage, attacks on production facilities, rallies, and other forms of direct resistance occurred in many places in West Kalimantan. However, the New Order state employed strong measures, including the use of military and police forces, to crush the opposition. After these activities did not work, some Dayak intellectuals launched a new strategy through the (re)construction of Dayak identity. A Pontianak-based indigenous non-government organization (NGO), Pancur Kasih, was the center of this effort. Dayak in West Kalimantan see this organization as “a symbol of Dayak cultural resurgence and economic emancipation” (International Working Group on Indigenous Affairs 1997). This organization, which can be regarded as an NGO, was founded in 1981 to empower the Dayak peoples “in the midst of strong flow of individualism and consumerism [sic]” (Atok 1998a: v). Its main principles are education, self-reliance and solidarity (Mecer & Florus 1998). From its first activity in providing education through the establishment of schools, now it has diverse activities which are administered by semi-autonomous units including credit union, rural bank, research institute on Dayak
culture, and advocacy group. Through their activities, this NGO is substantial in building Dayak movement against the impact of development and modernization.

Pancur Kasih was founded as Yayasan Karya Sosial Pancur Kasih (YKSPK – Pancur Kasih Foundation for Social Causes) in 1981 by seven Dayak men, most of whom were teachers. As the name indicates, the organization was aimed at engaging in social activities. The adoption of the name was inspired by an experience of Anselmus Robertus Mecer, the key leader of the organization, during his childhood in a Krio Dayak kampung (Tim Dayakologi 2006). He saw his father was channeling drops of water on the ground into a stream and put up a spout so that everyone could collect it for daily lives. Later in his adult life he realized that small things could be organized into a big force and making a bigger impact in society. Pancur thus means “big potentials and force”. Kasih means “love” which shows the strong influence of Christianity.

Pancur Kasih, as Mecer says, is aimed at fighting against poverty and ignorance (kebodohan) among Dayak peoples (Mecer 2008). To do that, he argues, Dayak have to liberate themselves from “the chain of ignorance, isolation and marginality” which can only be achieved “if they can access the same education as other educated peoples” (Wahono 2006, my translation) so that they can be dignified (bermartabat), independent (mandiri) and just (berkeadilan) people (Tim Dayakologi 2006). The founders envisioned Dayak as becoming proud of their identity and master of their own lives. They needed to be unified to build solidarity and communication channels similar to those that once existed in longhouses (Bamba, 1998, 32-33).

The pioneers of Pancur Kasih saw the possibility of fighting against marginalization. Many had taught at excellent schools in Pontianak, a phenomenon that made them the opposite of the stereotypical Dayak of being backward and stupid. However, under the authoritarian rule of Suharto all Dayak could do was to establish a school of their own in order to build critical consciousness among Dayak. Initially, their secondary school, SMP Fransiskus Asisi, operated in the building of a Catholic elementary school after the latter finished its sessions. Later they built their own school

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58 Pancur is the root word of pancuran which means water spout that usually made of bamboo.
59 The original text uses the term suku which means more closely to tribe. However, I use peoples instead to keep my consistency in treating indigenous groups as peoples.
building on a land parcel owned by the Archdiocese of Pontianak. By 1985 the organization had helped Dayak communities around Pontianak establish six schools. Apart from formal schooling, Pancur Kasih also organized adult education classes where discussions, workshops and training took place.

The founders introduced three principles: education, self-reliance and solidarity (Mecer and Florus 1998). To them, education was essential to personal, family and national development, because it is a process of penyadaran (conscientization). By being conscious of their strengths and weaknesses, a person can free themselves from constraining conditions such as ignorance, fear and so on. Once a person breaks the constraints, they can express themselves freely and become a full human being with high integrity and capability. Persons with such qualities can make big impacts on their families and build solidarity with other groups. The core of empowerment for Pancur Kasih is “strengthening for humanization” (Masiun 1996), a thinking closely related to Paulo Freire’s ideas of conscientization.

Pancur Kasih subsequently evolved into a big organization that has gained respect not only in the province but also at the national and international levels. Slowly based on their needs the organization established 13 units, some are autonomous but still under the coordination of Pancur Kasih. It then launched an integrated scheme of organization to cover ten topics: (1) critical education, (2) community organizing, (3) cultural revitalization, (4) community-based natural resource management, (5) financial independence, (6) people’s economy, (7) gender justice, (8) social security, (9) dissemination of ideas, and (10) networking. In this chapter I describe only a number of the units that are relevant to this dissertation.

After several years, Pancur Kasih decided to develop a micro-financing scheme operated through credit unions (CU). Initially aimed at serving the financial needs of those involved in Pancur Kasih, Credit Union Pancur Kasih is now aimed at providing Dayak with money for education, as well as encouraging them to engage in saving activities and financial planning (Lodo, Yusuf et al. 2005). From a membership of 61 in May 1987, the cooperative grew to 76,227 as of July 2009, with total assets of more than IDR 675 billion (around USD 68 million). To Pancur Kasih saving is a continuation of
the tradition of ancestors in storing rice for use in difficult times in the future. The goal is to permit people achieve a prosperous future financially, emotionally and spiritually (Anonymous). It became the model micro-finance institution in West Kalimantan and has inspired the establishment of other CUs not only in the province but in provinces as far as Papua and West Sumatera. As of August 2003 there were 38 CUs in alliance with CU Pancur Kasih under the umbrella of Badan Koordinasi Koperasi Kredit Daerah Kalimantan Barat (BK3D Kalbar – Credit Union Coordinating Board of West Kalimantan). The credit union has slowly spearheaded the empowerment program of Pancur Kasih with Mecer as the central actor.

Once the economic self-reliance endeavor had blossomed, consciousness of being Dayak and Dayak identity became a crucial issue. In 1991 Pancur Kasih founded an Institute of Dayakology Research and Development (IDRD) – renamed as Institut Dayakologi (ID) in 1998 – that specialized in research on Dayak culture and acted an advocate for Dayak culture as a means to cultural restitution and revitalization. A year later IDRD organized the Dayak Cultural Seminar and Expo that marked the rebirth of the Dayak movement. The meeting was attended by representatives of many Dayak groups from throughout Borneo, making it the biggest meeting of Dayak peoples since the Tumbang Anoi meeting in 1894 when the colonial power tried to pacify the Dayak tribes. IDRD launched a ten-year ethno-linguistic study in 1997 to identify the existing Dayak groups and their languages (Alloy, Albertus et al. 2008). This study was the first one in Kalimantan based on self-identification. ID also carries out research on oral tradition to “record, catalogue, analyze, and to try to preserve the Dayak culture through their oral tradition, music, and folktales.”60 Some of the stories have been published and are used in local schools. Finally, the new organization publishes Kalimantan Review, a monthly magazine which has gained credibility in reporting on the issues involving Dayak.

Security of rights and of safety from oppression became the next issue for Pancur Kasih. With the assistance of Yayasan Lembaga Bantuan Hukum Indonesia (Indonesian Legal Aid Foundation) and WALHI (Indonesian Forum for Environment), in 1993 IDRD

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60 [http://www.dayakology.org/eng/program.htm](http://www.dayakology.org/eng/program.htm), accessed on 4 September 2009
established Lembaga Bela Banua Talino (LBBT – Institute for Community Legal Resources Empowerment) along with Lembaga Bela Banua Puti Jaji (LBBPJ) in East Kalimantan (Tamen 2003). Both new organizations were aimed at revitalizing Dayak legal systems (consequently Dayak governance systems) and empowering communities through legal training and community organizing.

In 1995 Pancur Kasih established two units specializing on natural resource management. The first was Sistem Hutan Kerakyatan Kalimantan Barat (SHK Kalbar), later renamed as Program Pemberdayaan Sistem Hutan Kerakyatan (PPSHK). This unit was a spin off of a project on community-based forest management in cooperation with WALHI and Bogor (West Java)-based Lembaga Alam Tropika Indonesia (LATIN – Indonesian Tropical Institute). The project was initiated by YPSPK, ID and LBBT and formed Jaringan Kerja Sistem Pengelolaan Sumberdaya Alam Kerakyatan (SPSDAK) Kalimantan Barat. The project was aimed at establishing forest management regimes within indigenous communities, especially Dayak communities, as mainstream forest management had created severe environmental and social problems. In January 1995 the project was transformed into a formal entity as SHK Kalbar. Later in that year IDRD and LBBT again became the midwives of a mapping unit, Pembinaan Pengelolaan Sumber Daya Alam Kemasyarakatan (PPSDAK). This unit was to provide methods to document tenurial claims, which were, and still are, a crucial issue for Dayak.

PPSHK and PPSDAK share the task of providing information about resource rights, restoring cultural identity through the application of indigenous management regimes, and protecting natural resources by promoting sustainability (Mecer and Florus 1998) The existence of both organizations are thus central in reconstructing Dayak identity as they are involved defending and protecting the core physical elements of Dayakness, i.e., land, forests and rivers.

As the indigenous movement grew stronger, Pancur Kasih was at the center through facilitating the establishment of the Indigenous Peoples’ Alliance of West

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61 The project also cooperated with Samarinda-based PLASMA and LBBPJ to have an experiment in East Kalimantan. Later sistem hutan kerakyatan became popular due to the dissemination of the project and led to the formation of Konorsium Pendukung Sistem Hutan Kerakyatan (KPSHK – Consortium of the Supporters of Community-based Forest Management), a nation-wide network of individuals and NGOs with the interests in promoting community-based forest management.
Kalimantan (Aliansi Masyarakat Adat – AMA Kalbar) and puts it under its wings. This new organization was one of the organizers of the first congress of masyarakat adat (KMAN) in 1999. Since then it has become one of the leading regional indigenous peoples’ alliances in the country. In recognition of its achievements, the Indigenous Peoples’ Alliance of the Archipelago (AMAN) decided to hold its third Congress (2007) in West Kalimantan, with AMA Kalbar as the host.

Pancur Kasih family in 15 years became a big organization. To keep it focused on its shared goals, the leadership felt it necessary to have an institutional setup that replicated the solidarity that existed in longhouses (Mecer 2008). In June 1996 the existing units formed a hub called Konsorsium Pemberdayaan Masyarakat Dayak (KPMD – Consortium for the Empowerment of Dayak Peoples). The hub’s function is to coordinate its constituent parts to enable them to engage with each other. The inaugural meeting produced a common goal which was: “to enable indigenous peoples, particularly Dayak peoples in Kalimantan, in determining and managing their own social, cultural, economic and political lives toward self-reliance in solidarity, under the spirit of love to regain their identity, dignity and sovereignty.” In using the term Dayak, Pancur Kasih tries to incorporate other marginalized groups in Kalimantan by using quotations (“Dayak”). However, emphasis remains on the improvement of the fate of Dayak, the very reason of the establishment of the organization. To date, there are only a handful of participants and leaders in the organization who are not of Dayak descent.

With the new opportunities provided by the reformasi era after the fall of Suharto and the wave decentralization, the leadership of KPMD met in April 2002 and decided to make strategic coordination among the members more effective. They also changed the name of the consortium as Serikat Gerakan Pemberdayaan Masyarakat Dayak-Pancur Kasih (SEGERAK, Union of Dayak Peoples’ Empowerment Movement) with a legal status as federation. A few months later Pancur Kasih changed its legal status from a yayasan (YKSPK) to an association (Perkumpulan Pancur Kasih).

The works of Pancur Kasih has borne good fruit. Since the 1992 seminar the term Dayak has been widely accepted. Dayak identity has now a positive connotation. Most Dayak, if not all, are not ashamed of being Dayak, and are proud of it. Moslem Dayak
began to openly declare their identity as Dayak. Dayak voters became crucial in elections because in 2001 Dayak numbered one third of the total population of West Kalimantan (Alloy, Albertus et al. 2008). Pancur Kasih felt that it was the time to harvest the fruit and entered into electoral politics as a means of gaining greater impacts on the policy making. With many NGOs and units under its control, each of which has been active in many locations and affecting many communities, the organization was confident of getting significant votes. However, their experiment turned sour. In 2005 Stefanus Masiun, a former director of LBBT, lost the race for the seat of district head in the newly formed district of Sekadau. In 2007 Mecer was a running mate of Akil Mochtar (a Moslem Dayak who was a national legislator from the major Golkar party, now a justice at the Constitutional Court) and received the fewest votes. The failure of the electoral politics forced Pancur Kasih to evaluate the causes. In 2008 its leadership decided to overhaul the organization.62

4.5. Ideological Framework of Pancur Kasih

“to build the solidarity among Dayak peoples using Dayak values and local wisdoms” (Lodo, Yusuf et al. 2005, my translation)

Pancur Kasih developed its philosophy that led to the construction of certain identity of being a Dayak person or what can be termed as “Dayakness.” A.R. Mecer (n.d.) defines “authentic” Dayak as those who respect all of god’s creations and humanity, and who are humble as well. Dayak believe in the equality of all creatures, living and dead, because all of them have spirits. Among those spirits, the Supreme Spirit is the highest for Dayak in West Kalimantan, and is called by different groups as Jubata, Duwata, Allatuala, Date Petare, and so on. If humans wish to kill an animal they have to

62While the process is taking place 30 activists of Pancur Kasih ran for parliamentary seats at the national, provincial and district levels in 2009 election. Surprisingly, none of these candidates got seat.
### Table 4.2. Organizations under the control of Pancur Kasih

<table>
<thead>
<tr>
<th>Name</th>
<th>Field of activities</th>
<th>Founded in</th>
<th>Organizations involved in the formation</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fransiskus Asisi schools</td>
<td>Secondary education</td>
<td>1981</td>
<td>Lembaga Penunjang dan Pelatihan Pembangunan Sosial (an arm of Indonesian Bishops’ Conference)</td>
<td>Active</td>
</tr>
<tr>
<td>Credit Union Pancur Kasih</td>
<td>Microfinancing</td>
<td>1987</td>
<td></td>
<td>Active</td>
</tr>
<tr>
<td>Institute of Dayakology Research and Development</td>
<td>Research and advocacy for revitalization of Dayak cultures</td>
<td>1991</td>
<td></td>
<td>Active</td>
</tr>
<tr>
<td>(now Institut Dayakologi)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bank Perkreditan Rakyat Pancur Banua Khatulistiwa</td>
<td>Small lending bank for microfinancing</td>
<td>1992</td>
<td></td>
<td>Active</td>
</tr>
<tr>
<td>Dana Solidaritas Masyarakat Dayak (Solidarity Funds</td>
<td>Self-managed insurance scheme</td>
<td>1992</td>
<td></td>
<td>Active</td>
</tr>
<tr>
<td>of Dayak Peoples)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lembaga Bela Banua Talino (Institute for Community</td>
<td>Legal empowerment for Dayak peoples through promotion of</td>
<td>1993</td>
<td>WALHI, YLBHI, LBH Surabaya</td>
<td>Active</td>
</tr>
<tr>
<td>Legal Resources Empowerment)</td>
<td>customary laws</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Program Pemberdayaan Sistem Hutan Kerakyatan</td>
<td>Empowerment on forest management</td>
<td>1993</td>
<td></td>
<td>Dissolved in 2010</td>
</tr>
<tr>
<td>(Program on the Empowerment of Community-based</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Forest Management)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Koperasi Pancur Dangeri (Cooperative of Pancur</td>
<td>Strengthening of people’s economy, particularly rubber</td>
<td>1994</td>
<td></td>
<td>Inactive (merged into</td>
</tr>
<tr>
<td>Dangeri)</td>
<td>farmers</td>
<td></td>
<td></td>
<td>Institut Dayakologi)</td>
</tr>
</tbody>
</table>
ask for permission from this Supreme Spirit in a ritual. Violations subjected to adat law to bring back harmony. Respect for humans within the community, to guests or even enemies, is also important. Within the community, rituals throughout the human life cycle (primarily birth, circumcision, wedding, sickness, and death) emphasize this respect. The serving of drink and food to guests is also a sign of respect. Even enemies

<table>
<thead>
<tr>
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<th>Organizations involved in the formation</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percetakan Mitra Kasih</td>
<td>Printing and sales of stationeries</td>
<td>1994</td>
<td></td>
<td>Active</td>
</tr>
<tr>
<td>PPSDAK</td>
<td>Mapping adat lands</td>
<td>1995</td>
<td></td>
<td>Active</td>
</tr>
<tr>
<td>Pemberdayaan Ekonomi Kerakyatan (Peoples’ Economic Empowerment)</td>
<td>Education on credit union and entrepreneurship</td>
<td>1995</td>
<td></td>
<td>Active</td>
</tr>
<tr>
<td>Pendidikan Kritis (Critical education)</td>
<td>Scholarship scheme for university students</td>
<td>1996</td>
<td></td>
<td>Active</td>
</tr>
<tr>
<td>Program Pertanian Asli Terpadu (Program on Ethno Agroforestry)</td>
<td>Promotion of indigenous agroforest management regimes</td>
<td>1999</td>
<td></td>
<td>Inactive</td>
</tr>
<tr>
<td>Pemberdayaan Otonomi Rakyat (Empowerment of People’s Autonomy)</td>
<td>Empowerment of indigenous peoples</td>
<td>2001</td>
<td></td>
<td>Active</td>
</tr>
<tr>
<td>Advokasi Tambang Adat (Advocacy on Adat Mining)</td>
<td>Empowerment of community-based mining</td>
<td></td>
<td></td>
<td>Inactive</td>
</tr>
<tr>
<td>Radio Rama</td>
<td>Community radio broadcasting station</td>
<td>2004</td>
<td></td>
<td>Active</td>
</tr>
<tr>
<td>Ruai TV</td>
<td>Local television broadcasting station</td>
<td>2006</td>
<td></td>
<td>Active</td>
</tr>
</tbody>
</table>
who were killed and decapitated when headhunting (mengayau) was still practiced were
given respect. The group who kept the skull performed rituals for the soul of the enemy
for seven generations. A sign of humility is that individuals should not show their
strength or power. While visiting another house, weapons must be left outside.

Nature is also important to Dayak identity. Bamba (2000), one of the key thinkers
in the organization, has a straightforward statement on this: “Land, rivers and forests are
the three most important elements that allow a person to live as a real Dayak.” Land does
not only possess economic value, but also has a spiritual relationship and is a matter of
pride (Mudiyono 2005). Forests are the blood and soul of Dayak peoples (Petebang
1997). There is a Dayak proverb showing how the people perceive welfare in terms of
such relations: “rivers have fishes, forests have animals, when farming one gets rice, river
bends bear dragons, stones do not bear fruits, mountain does not move, banana trees bear
fruit, sugar canes have many offsprings” (Djuweng 1998, my translation).

Bamba (1998) argues that there are five principles of natural resource
management central to Dayak identity. The first is sustainability in which nature is
considered as the common home for all beings, human and non-human, and all must live
in harmony. A crucial practice in this regard is the performance of rituals asking for the
permission from the beings that live in a given location before manipulation of nature
takes place. Humans can then use and transform nature. Second, nature shall be shared
with everybody and for the common good as an expression of collectivity. Inhabitants of
a kampung should share their lands, produce, fish and hunting games with others.
However, sharing property does not mean that all property is communal, because
individual property rights are respected and enforced. Third, maintenance of biodiversity
is fundamental in Dayak agriculture, be it in dry rice fields, in rubber gardens or in forest
gardens (tembawang). Fourth, the manipulation of nature is for subsistence. Plant and
animals use is thus small in scale. If trade of natural goods occurs, it should be limited.
Finally, customary laws (hukum adat) are applied in natural resource management “to

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63In a later publication he lists seven principles: sustainability, collectivity, natural, spirituality, process,
Dayakologi.
ensure the maintenance of nature and everything in it for the sake of the communities”
. Bamba further argues that these principles are the same as the concept of sustainable
development, emphasizing that development should be economically beneficial,
ecologically friendly, and culturally un-destructive. To him, Dayak have practiced this
concept for hundreds of years. Such explanations show how strongly environmentalist
ideas have influenced Pancur Kasih. 64 This includes the framing of indigenous rights in
terms of ecological resilience (Alcorn and Royo 2000). Mecer also states that Dayak shall
have prosperous lives in a well-managed nature (Mecer 2008). Djuweng (1997) even
considers that Dayak worldview, in which everything on Earth has spirits that have to be
respected, as Deep Ecology. Such construction of indigeneity is common among
contemporary indigenous organizations (Harvey 2003). Sissons (2005) calls such an
indigeneity as eco-indigenism to distinguish from the indigenism in settler colonies.

Pancur Kasih is also very critical of mainstream development thinking, following
what Milton (1996) calls anti-globalist environmentalism. This approach contends that
development damages the environment through a conspiracy of wealthy nations in the
North and their allies in the South. It posits that the imposition of western science upon
local cultures is partially to blame. Stepanus Djuweng, another key thinker of Pancur
Kasih, clearly follows this view and dubs (globalist) development discourse as a
neocolonial and neo-imperialist project that creates “widespread impoverishment, social
injustice and environmental problems” (Djuweng nd). He also equates development with
oppression (Djuweng 1998). He further argues that indigenous peoples consider that the
source of their wellbeing stems from being in, rather than possessing, the world. To
Dayak peoples, he continues, a prosperous society is one which lives in harmony with
nature. Thus, Pancur Kasih distances itself from capitalist practices. However, this
position began to change at the turn into 21st century, as is seen in the motto of CU
Pancur Kasih: “to age is inevitable, to be rich is an option.”65 Being rich is seen as a key
for poor people to gain control of their lives (Mecer 2008).

64 This is not surprising given the close relationship between the leaders and thinkers of the organization
with Indonesia’s environmental movement, especially WALHI. Even now, the majority of WALHI West
Kalimantan is the units of the organization.
65 The original Indonesian version: “Tua itu pasti, kaya itu pilihan.”
The organization is strongly Catholic in faith. Mecer, for example, considers human beings are the image of God or *Imago Dei* (see also Tim Dayakologi 2006, Mecer 2008). Using the parable of a human being as a photograph of God, he believes that God takes good care of human beings. God can act by using others. People see the reflection of themselves in other human beings; therefore they will see their own suffering in other person’s suffering. Masiun (1996), another key person in Pancur Kasih, writes that this entails harmonious, peaceful and loving relationships, not only among human beings but with all of God’s creation. Such view falls within the official social doctrine of the Catholic Church, which applies the concept as a means of asserting the dignity of a human person and the relationship among human beings (Pontifical Council for Justice and Peace 2004, paragraphs 108-114). The doctrine also introduces social sin which is a “sin committed against the justice due in relations between individuals, between the individual and the community, and also between the community and the individual” (Pontifical Council for Justice and Peace 2004, paragraph 118). The salvation from such sin or elimination of injustices is thus crucial in making a better world. The works of Pancur Kasih have been characterized as acts of salvation since they were aimed at conscientization (Janting 2007).

Pancur Kasih is also inspired by ideas from liberation theology, which offers three inseparable elements of liberation: liberation from economic, social and political violence; liberation that creates human solidarity; and liberation from sin (Nitiprawiro 1987). The liberating mission of Pancur Kasih falls into this realm, which Wahono (2006) considers as its spirituality.

In addition, Pancur Kasih employs beliefs from Catholicism to explain what it means to be Dayak. Mecer (2008) uses the term of ‘Dayak salvation,’ a term that has strong influence from Christian belief on the salvation by Jesus Christ. However, Dayak salvation has strong worldly notion as it emphasizes four ways: eating and drinking, storage of seeds, inability of a person to live alone, and the performance of adat rituals in

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66This book was banned during Suharto’s New Order authoritarian government due to some Marxist teaching that it contains. The government imposed strong censorship on Marxist ideas as a part of its war against communism. Its author is the editor of Mecer’s biography.
the beginning and the end of each human activity. Pancur Kasih institutionalizes these ways by transforming the concepts into the organizations mentioned above.

All of these are involved in the construction of a new Dayak identity, an identity that counters the process of Othering suffered in the past. The new identity of a modern Dayak is one who maintains cultural identity while responding to contemporary problems (Kusni 2001). Some authors have written on identity construction within Pancur Kasih (e.g., Davidson 2002, particularly Chapter 4; Thung et al. 2004). In reconstructing what it means to be Dayak or “Dayakness,” Pancur Kasih oduces knowledge about Dayak, especially through autoethnographic approaches, including ethnographic accounts of Dayak by Dayak writers and by producing counter-maps. The Institut Dayakologi spearheads the former by conducting and publishing research on Dayak cultures. PPSDAK Pancur Kasih takes a leading role in the latter.

Reviving “Dayakness” is also done through reintroducing kampung as a geopolitical and social unit. The kampung is the smallest governance unit. In the past, a kampung consisted of a longhouse, central to the lives of Dayak peoples, which was governed by adat rules and leadership. The revitalization of concept of the kampung enables the institution of adat to be revived. LBBT is at the forefront in this effort. Pancur Kasih introduced the idea to the district government of Sanggau and invested resources for the purpose, although the outcomes was disatisfying.

An important outcome of the revitalization movement is the flourishing recording industry of Dayak songs. New artists, including some activists of Pancur Kasih, have written and produced recordings, primarily on compact discs (CDs). New singers have become new Dayak icons. Although the recordings are not of good qualities as they are not supported by established recording industry, in every market in West Kalimantan one can expect to find someone selling CDs of Dayak songs. In events largely attended by Dayak persons the songs are played on sound system or even performed live. Such practice also occurs in Pancur Kasih-sponsored events. Pancur Kasih even has a

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67 Davidson (2007) is particularly critical as to how the identity construction contributed to Dayak-Madurese violent conflicts in 1996 and 1999.
community radio, Radio RAMA, which broadcasts these songs as well as the songs of other ethnic groups in the province.

The Dayakness that Pancur Kasih promotes is thus a combination of revived Dayak cultures and values, environmentalism, and Catholicism. Such identity can potentially face challenges as the last two to some extent promote modern values that have distinct values from Dayak values that are inherited from generation to generation.

In a newly published book written by the activists of Pancur Kasih, Giring (2012) confirms my readings on the organization’s ideological framework. He writes that the philosophy of empowerment of Pancur Kasih is a combination of the indigenous Dayak philosophy, the Social Doctrine of the Catholic Church, and science and modern technology (Giring 2012, 9). Empowerment here embraces “a spirit of critical consciousness, liberation and ability to actualize local potentials” (Giring 2012, 11) in order for “the people [to] lift themselves out of [marginalization] to a better life, and their improvement becomes a continuing process” (Giring 2012, 12). By Dayak philosophy, they mean (Giring 2012, 9):

[A] philosophy [that] is manifested in the way they live and manage their daily existence and environment. As sentient beings, they have to fulfill four needs not only to survive physically but to live a meaningful life. These requirements are food and drink (physical needs) in order to live, seeds (sustainability) to transform the earth for survival, and harmonious relations with their fellow human beings (social needs) and with God (spiritual needs).

This philosophy becomes the bases of Four Ways of Dayak Salvation as a means to assure the Supply of Basic Life Needs, the Seed Supply to be Cultivated, Social-Cultural Needs, and the Fulfillment of Ritual/Spiritual Needs (Wijaya 2012, 54-56). From the social doctrine of the Catholic Church it adopts “the spirit of love as a force of empowerment in its work for human liberation of the oppressed” as a means “to establish social justice and peace, prioritize the interests of the most needy (victims of ignorance and structural inequity) and respect human dignity” (Giring 2012, 10). It clearly shows the strong influence of liberation theology. Finally, it employs modern science and technology for “the internalization process of its philosophy, critical education methods and content, development models including financial management, advanced learning
and expansion of the empowerment movement to other areas” (Giring 2012, 10). In so doing, Pancur Kasih combines scientific approaches with spirituality (heart) so that “the Dayak’s noble values and the spirit of love” is taken into account in practice (Giring 2012, 10). In effect, the organization strives “for [a] social change [that] starts from a process of self-empowerment, which is self-reinforcing as one struggles for affirmative action to attain a better alternative social order. And learning continues as one serves a broader community through a path of peace that is inclusive of all classes and ethnicities” (Giring 2012, 10).

4.6. The story of a counter-mapping movement: the case of PPSDAK

The adoption of mapping by Pancur Kasih was decided out of “concern over the brink of environmental preservation as the ‘home’ and source of livelihood for adat communities in West Kalimantan, particularly on natural resources and ‘traditional spatial regime’ (tata ruang tradisional)”68. The organization learned that this approach could be a means to gain “recognition on the tenurial and management rights of their natural resources” by “explaining to ‘outsiders’ on the existence of adat communities and their territories” (Natalia, 1999, 1). Furthermore, through this process modern maps can be combined with mental maps of masyarakat adat to produce “valid maps of spatial use that can be understood by both those who are familiar with modern maps and by traditional people in the village”. Communities are able to “learn the blend[ing of] the traditional and the modern constructively”. The target of such an approach is “to train and facilitate Dayak communities in creating their own maps in order to be used for land right advocacy and enhancing the capabilities of local communities in dealing with land users from outside and external agencies”.

In 1992 when WALHI invited Pancur Kasih to participate in a mapping exercise in Long Uli (East Kalimantan), Kristianus Atok, who later became the founding director of PPSDAK, came as a representative. He learned mapping techniques from the WWF team (of which Martua Sirait was a member) and the East-West Center team. A year later he participated in a training workshop on community mapping in Chiang Mai (Thailand).

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68Tata ruang is usually translated as spatial plan. However, in this context it refers to the resource management regime.
with three other Indonesians, including Stefanus Masiun from LBBT. He also assisted Jeff Fox of the East-West Center to conduct a demographic study of forest dwellers (Fox & Atok, 1997). In 1994 Pancur Kasih organized the first counter-mapping workshop in West Kalimantan, with funding from the Ford Foundation and Biodiversity Support Program. The workshop included a mapping exercise that took place in the kampung of Sidas Daya (Sengah Temila subdistrict, then part of Pontianak district) with the participation of 24 activists from Sarawak, Sabah and Indonesia (mostly from Pancur Kasih). Alix Flavelle was one of two facilitators in the exercise who were also facilitators of the Chiang Mai workshop. She introduced surveying techniques using compass and GPS. Based on the training, Atok conducted mapping exercises in three other kampung in Ketapang district. In one of the exercises Frank Momberg, a geographer from Germany, who worked for WWF Indonesia, led the mapping. He introduced the importance of having history of kampung being mapped into a map layer. In all of these exercises LBBT and IDRD were the organizers.

Learning from the mapping exercises in those kampungs, Pancur Kasih decided to write a proposal to be submitted to the Ford Foundation. The proposal writers also wrote a manual. The proposal was submitted through IDRD and was accepted. However, as IDRD was already a grantee, the Foundation asked Pancur Kasih to set up a new entity. Tamen and Getruida (2003) describe the process of establishing the new organization. The Ford Foundation also needed a sponsor letter from the government as required by the Indonesia’s State Secretariat, with which the donor organization has an agreement. Finally, on July 31, 1995 Pancur Kasih formally established Pembinaan Pengelolaan Sumber Daya Alam Kemasyarakatan – Pancur Kasih (abbreviated as PPSDAK-PK). Three years later the name changed to Pemberdayaan Pengelolaan Sumber Daya Alam Kerakyatan.69

69The first name was a compromise after the second name was rejected by the State Secretariat. Pembinaan actually has paternal meaning as it means guidance, whereas pemberdayaan means empowerment. Kemasyarakatan has a root word masyarakat (society); kerakyatan comes from rakyat (people). In Indonesia the second has stronger political notion. However, the use of rakyat for a social movement had a negative connotation to New Order regime, since it reminded the Indonesian Communist Party’s affiliated youth organization Pemuda Rakyat.
Tamen and Getruida (2003) describe what followed after the formation of PPSDAK. Pancur Kasih formed an implementation team and recruited new staff members, either new recruits or those who worked at other units. For the first team Mecer was the responsible person, while Atok was its first project leader-coordinator. None of the staff members had formal training in mapping, although some of them had a surveying class in school or university. Because of this, many questioned the competency of PPSDAK to conduct mapping projects. Nonetheless, PPSDAK disseminated the knowledge on counter-mapping to its own staff, members of other Pancur Kasih units and to communities which were the planned targets of the project. They also collected topographical maps, particularly those from the Indonesian Army’s Topographical Service.

As the literature on counter-mapping was limited at that time, PPSDAK had limited information from which to develop the conceptual and methodological base for its projects. Atok provides good background of the situation during the early years of the organization. Projects were to be designed to assist Dayak communities map their lands, using the kampung as the mapping unit, so that the latter could gain legal standing for their land claims, as well as in managing their natural resources. Counter-mapping was seen as a way of empowering the weak: “by teaching mapping skills to local communities it can interpreted as a new form of empowerment”. The PPSDAK sees that the technological transfer embedded in a mapping exercise can counter the state monopoly on information about natural resources. Mapping by communities, based on community inputs, is therefore seen as the correct means to accurately document how they use their lands. To provide a legal foundation, this new organization employed the existing laws favorable to indigenous rights, particularly Spatial Planning Act (No. 24 Year 1992) and Family and Community Welfare Act (No. 10 Year 1992) which provided the windows for community participation.

Masiun considers this kind of mapping a liberating act. Such understanding entails a set of basic assumptions:

PPSDAK uses the term community mapping as other organizations in Indonesia do.
[The activists] are facilitators; villagers have the same rights, status and dignity as any other people in the world; they have the capability to develop for and by themselves; they have natural resources that they have to control; solidarity is our basic capital; the goal of our struggle is to achieve justice and truth; human beings, nature and environment have to take care of, complement and learn from each other in harmony.

He (Masiun 1996, 2-3) also argues that a prerequisite to a mapping exercise is community organization so that the it can “understand their own problems; know who they are; know their own history; be conscious of the importance of solidarity and unity; understand laws related to their rights; have a sense of having the same destiny and ideals; possess dignity; be confident; be able to work together; be able to learn, to express opinions, share experience, to discuss and have dialogue openly in groups.”. Therefore, surveyors in counter-mapping are more facilitators and researchers than technicians, because mapping skills are only one of the many skills they have to possess. These quotes show traces of Freire’s ideas.

Environmentalist ideas also very much affected the approach of PPSDAK. In its brochure, the organization states that the establishment of the organization was to take part in “a global phenomenon of the environmental protection and sustainable development inspired by ecological balance”. The brochure continues by stating that “the recognition of adat rights over natural resources is essential to environmental sustainability and the welfare of current and future generations.” Mecer (2008) also believes that natural resources and environmental planning is a necessity. Mapping programs were seen as an entry point for community-based natural resource management. The now dormant in-house magazine, Gong Borneo, mostly deals with environmental issues. PPSDAK also investigated the use of mercury in small-scale mining.

Environmentalism was part of a strategy to avoid being suppressed by the state during New Order period. PPSDAK used the language of community-based spatial planning so that the results of mapping projects could be fed into the development planning processes (Atok et al. 1998). The term pemetaan partisipatif is a way of using participatory approaches which had become part of the development industry. This is
why Peluso’s article upset Pancur Kasih and other organizations because she publicizes the strategy.

As the issue of rights is central, PPSDAK considers its mapping program to be based on “universal values of human rights, the importance of local initiatives, and social justice” that can be “a powerful tool to strengthen adat resistance and communities’ ability to protect their rights over lands and their unique way of life”. In terms of identity, mapping is expected to improve the relationship between young Dayak and their elders, so that the former can better understand their roots. It thus strengthens “the pride of being Dayak”.

As a part of bigger social movement PPSDAK also tries to link with other social movements outside environmental one. However, its main goal is to protect and seek recognition of indigenous lands and cultures. It also seeks alliance with other movements. Atok, for example, explores the link between counter-mapping and agrarian reform, where the former can be a model for the latter. Soetarto also argues that counter-mapping can be a step toward land reform.

PPSDAK laid out its vision and mission not long after its establishment. As a unit of Pancur Kasih, this organization has always adopted the vision of its mother organization. During its early years the vision was: “masyarakat adat are able to determine and manage their own social, cultural, economic and political lives toward self-reliance under the spirit of love and solidarity and to gain recognition, respect and protection based on Pancasila and the Constitution of 1945”71 Its mission was, however, more specific: “environmental management for sustainable development inspired by ecosystem balance.” Its objectives were to: empower adat communities on ‘traditional spatial regime’ and sustainable environment, work on conflict resolution on overlapped spatial use, achieve the recognition of ‘traditional spatial regime’ in national spatial plan, to protect endangered living resources (plants and animals), document indigenous knowledge. In addition to facilitate mapping, PPSDAK also had programs on the

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71Pancasila is the state ideology consists of five principles: monotheism, just and civilized humanity, national unity, democracy, social justice. During New Order regime all organizations had to explicitly adopt this ideology.
strengthening of *adat* ‘spatial regime’ and documentation of *kampung* history and custom as well as other research and knowledge management activities.

For the period of 2004-2008 it kept to the ideals of Pancur Kasih, although it revised its mission: “to empower adat communities toward the independence of natural resource management through the organization of grassroot communities to produce participatory mapping, the handling of conflict and violence related to natural resource management both within the communities and with outsiders, development of information system on spatial plan and land use, improvement of the effectiveness of local institutions and strengthening *adat* lands, and institutional strengthening of PPSDAK.”72 Some new issues were introduced, including the formation of community alliances, engagement with government through “communication and dialogue,” and development of a spatial database for *adat* communities in West Kalimantan.

To implement these programs PPSDAK created three divisions: participatory mapping, GIS, and strengthening of *adat* land (*penguatan kawasan adat*). If the first two were technical, the last one dealt with social and cultural aspects of community lives, including assistance in documenting *adat* laws, *kampung* planning, and documentation on *kampung* history. Thus PPSDAK has a community organizing role as part of its program. By definition community organizing is “a comprehensive framework of processes toward the solution of certain problem in the community” to enable them to analyze the problem and take action based on it. However, the organization tends to employ only community meetings which are only incidental, whereas having community organizer living in the community is rarely done.

When it was established, PPSDAK did not have staff members who were trained in surveying and mapping, other than its coordinator. To enable them to coordinate mapping exercises, the organization required its staff to participate in both in-house training and trainings organized by other organizations. To become a mapping facilitator,

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72The original Indonesia text is: “Memberdayakan Masyarakat Adat (MA) menuju kemandirian dalam pengelolaan sumber daya alam (PSDA) melalui fasilitasi: pengorganisasian “di tingkat basis” untuk menghasilkan Pemetaan Partisipatif, penanganan konflik dan kekerasan baik internal maupun eksternal yang berkaitan dengan pengelolaan sumber daya alam (PSDA), pengembangan sistem informasi tata ruang dan tata guna tanah/lahan, peningkatan efektivitas instusi lokal dan penguatan kawasan adat, serta penguatan institusi PPSDAK.”
the organization required its staff members to learn basic computer skills and surveying, as well as having participated in a mapping project. The training programs taught basic cartographic knowledge and techniques: what constitutes maps and types of maps; basic surveying and mapping procedures; the operations of compass, measuring tape, and GPS receiver; basic geometric calculation; map drafting. After having classroom sessions, participants had to join a mapping exercise.

In August 1995 PPSDAK organized basic mapping skill classes and PRA for its staff, both in class and in the kampung. Tamen and Getruida briefly discuss this process. It started with classroom sessions on the “philosophy of mapping program and the application of geographical science in mapping”, followed by a field practice in Kampung Nangka (a kampung northeast of Pontianak) carrying out a real mapping exercise with the community. Participants then had sessions on “basic mathematics” back in the classroom. Later they had to explain counter-mapping to villagers in several kampung and were trained in PRA. At the end of this, however, only a few had mastered sufficient knowledge and skills to conduct a mapping exercise. To overcome this problem the coordinator of the organization sent them in groups to carry out exercises so that they could learn from each other.

In addition to in-house trainings, participants visited other projects and organizations to improve their knowledge and skills. Some, for example, did a comparative study of the mapping exercises conducted under the Social Forestry Development Project in Sanggau district. This German *Gesellschaft für Technische Zusammenarbeit* (GTZ)-funded project, in cooperation with Indonesia’s Ministry of Forestry, employed a community-based approach in producing Village Land Use Plans (*Tata Guna Lahan Desa Kesepakatan*) which combined a top-down and bottom-up processes. Though there were substantial differences in the methodology of this project, participants learned about the strength of their methodology. Other training included field mapping training in Krui (Lampung), training on gender, and training on social works.

Although they now had the basic knowledge and skills, staff member did not have a standardized methodology until 1996 when PPSDAK mapped the kampung of Tapang Sambas and Tapang Semadak. Later many NGOs which were members of JKPP adopted
this methodology after their members participated in training workshops organized by PPSDAK. This training, which was funded primarily by the Biodiversity Support Program through its PeFoR (People, Forests and Reef) program, produced a generation of mapping facilitators in West Kalimantan and the rest of the country. I will describe this methodology in Chapter 5.

The establishment of PPSDAK Pancur Kasih marked the rapid growth of counter-mapping movement in West Kalimantan. Apart from this organization, several other NGOs in the province made counter-mapping part of their programs, although these programs were smaller than that of PPSDAK.

The mapping exercises of the first years were mostly in *kampung* from which the members of Pancur Kasih come. The assumption was that in their own *kampung* the members could more easily convince their siblings and relatives. In the first year PPSDAK mapped only 16 *desas*, but by November 2008 the number had increased to 309 *kampung* and/or *desa* in 34 sub-districts belonging to nine districts of the West Kalimantan Barat with a total area of 1,285,954.25 ha (around 8.76% of the province). This is the largest area of any mapping movement in Indonesia, since most NGOs have only mapped not more than 10 villages in ten years. The counter-mapping movement thus has expanded considerably in West Kalimantan and has become the yardstick for the movement in Indonesia.

Pancur Kasih, and its member units, plays an important support role for the counter-mapping program. It emphasizes the development of economic power among Dayak by establishing credit unions in areas where it works and mapping land claims as a means to assert control over lands. After credit unions are established, they encourage the communities to map their lands. On the other hand, if PPSDAK works with a community in counter-mapping exercise, it also promotes credit unions. The initiators of counter-mapping in West Kalimantan, LBBT and ID, continue to promote counter-mapping as does PPSHK. Pancur Kasih is also active in promoting counter-mapping through other networks, particularly the WALHI Kalbar in which it is a major player. Since 2000 WALHI has been involved in, and has also funded, some
counter-mapping exercises in the province, especially in areas where oil palm expansion occurred.

The successes in defending lands from outsiders through mapmaking have influenced other indigenous communities to map their territories as well. Because of this, in June 1999, 273 desa had requested mapping projects. With this big influx of requests, PPSDAK recruited members of adat communities as community mappers (CMs). The main criteria for the selection of these individuals were those who had showed good skills and keen interests in developing mapping, regardless of their educational background, during the mapping projects in their kampung. The CMs are responsible for facilitating mapping in kampung. The organization also initiated the establishment of Jaringan Persaudaraan Masyarakat Adat Pemetaan Partisipatif (JP-MAPP – Indigenous Peoples’ Fraternity Network on Participatory Mapping) which has the task of coordinating and implementing participatory mapping in the kampung. This network was established in 1997 as a forum for information exchange and community learning among the kampung that had already been mapped. These CMs provide substantial help to PPSDAK in conducting mapping. They received an honorarium for their work: per diem during mapping exercises and monthly ‘brotherhood’ fee. Pancur Kasih envisions that in the future local communities will conduct mapping exercises themselves (through their respective Community Mappers) by establishing service points at the district level, while the organization will monitor and ensure the quality of the work. However, this dream is difficult to realize, as JPMAPP is now dormant due to the lack of leadership and funds.

4.7. Summary

The history of dispossession of Dayak peoples has a long history, even prior to the arrival of European. Using the ideas of Gregory (1994) on the strategies of dispossession, Dayak peoples in West Kalimantan suffer from all three types of disposessions: disposessions through Othering, spatializing and naming. The dispossession deepens with the intrusion of global economic interests through the

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73 Natalia (1999) lists 5 desas which were able to fine the companies using customary law.
development of large-scale resource extraction, started with timber logging and then replaced by oil palm plantations. Although the peoples had participated in global markets of forest commodities prior to the arrival of Europeans, the impacts were unprecedented to Dayak peoples.

When Dayak peoples gained more power in the local politics, they sought ways to reclaim or assert their identities and control over resources. For this reason, identity politics becomes very prominent in daily lives. The Dayak also sought means to regain controls over lands and natural resources, in which counter-mapping is central. However, land grabbing – often works through the decentralization scheme in permitting process – provides a challenge in terms of the scales of social movement.

The counter-mapping movement in West Kalimantan has pre-dominantly been led by Pancur Kasih, a Dayak organization. It has been the only local organization that works solely on counter-mapping and thus been able to map the largest area under the scheme in the country. It has been a center of excellence for the movement in the country, where other organizations learn about the methodology of counter-mapping.

As do other social movement groups, the counter-mapping movement within Pancur Kasih Kalimantan evolved through a confluence of different Discourses. If the counter-mapping at the national level has strong doses of environmentalism, the Pancur Kasih-led counter-mapping movement in the province has particular indigeneity. Because its founders and leaders are Dayak persons who believe in Catholic faith and have university education, the indigeneity it constructs is strongly influenced by Dayak belief systems, Catholicism and environmentalism. Such construction has led to the development of a Discourse of counter-mapping unique to Pancur Kasih.

The Discourse blends abovementioned influences to construct a distinctive Dayak identity. Pancur Kasih translated such ideological background into counter-mapping methodology that intends to counter land claims of the dominant groups while revitalizing/reconstructing Dayakness into the map artifacts and through community organizing. In so doing, the organization translates indigenous Dayak spatial knowledges into modern cartographic language. It has produced an army of mapping facilitators and community mappers recruited from its staff members and community members.
respectively to be, using Escobar's (1995) term, the 'professionals' of the Discourse of counter-mapping. These professionals have largely contributed to the rapid expansion of counter-mapping in the province, along with concerted efforts of the units of Pancur Kasih. The Discourse that Pancur Kasih develops can be considered as a hybrid between indigenous Dayak Discourses and Discourse of dominant modern society. The next chapter shows how such hybridity occurs.
CHAPTER 5
COUNTER-MAPPING IN ACTION

5.1. Introduction

This chapter tries to show the actual events of the interaction between cartography and indigenous spatial knowledge within counter-mapping and how the events affect the communities. It is divided into two parts. First, I examine how the activists affiliated to Pancur Kasih perceive and apply counter-mapping. I start exploring the understandings of NGO activists on the concepts related to cartography/mapping and empowerment, and how they interpret those concepts and introduce them into the methodology of counter-mapping. This part is based on two focused group discussions on the conceptual understanding of counter-mapping and on methodology, respectively, as well as written materials on methodology. In the second part I describe how the geographic translation process took place during counter-mapping exercises based on my observation, interviews and focused group discussions. I begin with the discussion on the spatial literacy of the Maap people as an example of Dayak spatial literacy. Then I retell the steps of mapping exercise in a desa where the Maap people live. Finally, I discuss how the community of Maap perceives the counter-maps and how the counter-mapping exercise affects their lives.

5.2. The Understanding of Counter-mapping by PPSDAK

To understand the perceptions of the proponents of counter-mapping in West Kalimantan I asked PPSDAK to invite members of Pancur Kasih and other organizations to gather in a focus group discussion. Fourteen participants, all males coming from seven organizations, came to the discussions which were held on 9-11 March 2006. PPSDAK as the host had the largest contingent with six participants. Four organizations, which are the units of Pancur Kasih, sent a participant each. These organizations were PPSHK (dealing with community-based forest management), Institut Dayakologi (focusing on the research and revitalization of Dayak cultures), LBBT (focusing on the revitalization of customary laws), and POR (focusing on the political empowerment of Dayak communities). Other organizations involved were WALHI Kalimantan Barat (the chapter of WALHI in West Kalimantan), Cassia
Lestari (focusing on biodiversity conservation in Bukit Baka-Bukit Raya National Park in eastern part of West Kalimantan), and BioDamar (dealing with community development in Gunung Palung National Park in western coast of West Kalimantan). Except Cassia Lestari, all these organizations had involved in counter-mapping activities, either by introducing the idea to the community or implementing the actual mapping exercises.

After a round of brief introduction with special emphasis on the participants’ previous involvement in counter-mapping, I requested them to write a definition of *pemetaan partisipatif*, a term familiar to them (Table 5.1). Most of their definitions emphasize adat land claims. Such a view is understandable as the participants were all concerned with how the communities with whom they worked could secure their lands from appropriation. I then picked up 13 keywords from these definitions as topics of further discussion in order to understand the concepts behind these definitions. The following is the description and discussion of each keyword.

5.2.1. Map

Most participants agreed on the definition widely adopted by cartographers, which is “a description of an area on earth that has scale, direction and position as well as having [legend and notes].” This description conforms with cartographic conventions that maps have three basic attributes: scale, projection and symbolization (Monmonier 1996). Thus, even though the participants were mostly of Dayak descent, their understanding of maps leaned toward the Western knowledge tradition. For example, to all participants, maps were graphic or pictorial spatial representations. This way of thinking can be traced back their training. PPSDAK’s mapping manual, for example, Atok (1997, 4) defines a map as “a picture of a part of earth surface that has been reduced using scale, either partly or as a whole, in a piece of paper.” The strong bias towards vision suggests the powerful influence of Western spatial knowledge tradition.
Table 5.1. Definitions of counter-mapping according to activists

1. An effort to build consciousness on spatial control
2. To draw, to make a picture of a given area as it is together with all parties
3. Organizing, building consciousness of and promoting recognition of people’s managed area
4. A medium for organizing indigenous peoples [to improve their] bargaining position
5. Documentation of customary territory (wilayah adat)
6. To produce maps jointly among NGO and indigenous people; a medium for indigenous people’s empowerment in defending their area (wilayah) from environmentally destructive activities
7. A process for critical learning on community’s natural resource management, manifestation of community’s knowledge and natural resources
8. Manifestation/production of spatial plan according to local community by involving them in the form of maps which contents include potentials of a kampung
9. Strengthening community rights on customary territory by transforming oral information into written form
10. Map making process on a given area which is conducted together with persons/community living in the area and the produced map will be used for their common interests
11. An effort to clarify boundaries of customary territory of a community with their full participation so that they know the reasons and goals of map production
12. An activity to carry out the measurement of a kampung’s territory to anticipate problems on territorial disputes and as a bargaining position when outsiders come
13. To empower local communities in natural resource management by enhancing their capacities in conflict resolution as well as conservation of natural resources and their culture
14. To clarify customary/kampung territory, land tenure and existing land use

However, there was a hot debate as to what constitute maps. One group, which worked primarily on the technical aspects of mapping, questioned the validity of maps without scale (i.e., sketch maps). One of them, a GIS technician, argued that a drawing of the earth’s surface without scale is not a map; therefore, a sketch map is a misleading term. The other group who were more socially oriented argued the opposite: a sketch map is a map regardless the absence of scale.

However, in another occasion the GIS technician said that north-south orientation is useless in daily life, because it is not practical. It seems that, although the use of cartographic convention is central to his works, in practice he may largely resort back to local knowledge and practices. His comment might have been an expression of his
inner struggle as an indigenous person who applied scientific cartography in his work (cf. Louis 2004).

5.2.2. Pemetaan

The activists define pemetaan as a process of making maps. Therefore, the term refers to a production of maps as artifacts. Such a view suggests that mapping is a technical matter, a technological process to produce maps. This meaning is commonly adopted in Indonesia as defined in the most authoritative Indonesian dictionary (Pusat Bahasa 2007, 867) and even by the Indonesian surveying and mapping agency, Bakosurtanal (renamed as Badan Informasi Geospasial – Geospatial Information Agency). To Wood (1993), however, such a definition is mapmaking, while mapping is about ordering our knowledge of the world. In his words, mapping is “a universal expression of individual existence,” whereas mapmaking is “an unusual function of specifiable social circumstances arising only within certain social structures” (Wood 1993, 50). Using such understanding and the analogy of writing and speaking, we can say that mapmaking is a process of inscribing one’s knowledge of the world, and mapping is equal to speaking (Ingold 2000, 231).

5.2.3. Community

The discussion about this topic was interesting, yet confusing for most participants. They realized that they used the word everyday but never really thought about it conceptually. They defined the term as:

a) a group of people in a social movement (that have the same goal mission)

b) a group of people with the same faith

c) a group of people who inhabit an area and has rules

d) a group of people who share the same way of life

Although they produced several definitions, they gave a set of attributes to the term: a group of people, homogeneity or common identity, having the same rules/consensus, having a structure, and inhabiting the same area. Most NGO activists in Indonesia shared such understanding. Agrawal and Gibson (2001, 2) note that the proponents of CBNRM
see “community as a small spatial unit, as a homogeneous social structure, and as shared norms.” Both authors argue that such understanding ignores the power struggles for benefits within the community. The term, as Berkes (2001, 623) argues, is a “gloss for a complex phenomenon because social systems are multiscale” and it “hides a great deal of complexity.”

A given community usually has an unequal power relation within it and has diverse interests among its members. It generally has an elite group that tends to dominate decision making processes; captures social, economic and political benefits from any initiative (both from within and from outside); and assumes to be the authentic representatives of the community. Within the community this elite group is usually elder males from the ruling families or those who have climbed up the social ladder due to their wealth or profession (teachers, civil servants, and priests of the dominant religion within the community). This phenomenon applies within and across gender and age. Therefore, although they are usually marginalized within the community, some individuals within the women group tend to dominate others. So does within the youth group. Such situation occurs in societies claimed to be egalitarian (such as Dayak Iban), and certainly so in a stratified societies such as Dayak Maloh (King 1985). Every member of the community has his/her own interests to meet the ends he/she has in mind. With such condition, a homogeneous community is almost impossible, if not none.

Community is thus an intricate web of power relations, identity, values, etc that goes across temporal and spatial scales. Even what constitutes community is contested and struggled over, because it “is full of, and is constituted by, contradictions” (Staeheli 2008, 7). The concept of community entails how to define its ‘boundaries’ (be it spatial, social, ethnic or ideological ones), who can be its members (inclusion and exclusion), how the members must behave (rules and norms), and so on (Kumar 2005). Therefore, the common understanding of community as the activists understood is somewhat ‘imagined’: “small size, territorial fixity, group homogeneity, and shared understandings and identities” (Agrawal & Gibson 1999, 640). Walker (2001, 6, emphases in original) argues that this imagined community is a result of “social simplifications that all too readily take on spatial and temporal form,” which he terms as ‘community
simplification’ to make an analogy to James Scott’s ‘state simplification’ (Scott 1998). Therefore, there is “a need to focus on if, when and how people come to have a sense of shared belonging that may amount to 'community’” (Walker 2001, 15, emphases in original). Furthermore, there is a need to “focus on the divergent interests of multiple actors within communities, the interactions or politics through which these interests emerge and different actors interact with each other, and the institutions that influence the outcomes of political processes” (Agrawal & Gibson 1999, 640).

5.2.4. Critical Consciousness and Learning (Penyadaran dan Pembelajaran Kritis)

The participants seemed to have a similar understanding on this term, which they defined as:

- a change of mindset
- to understand themselves so that they can have a clear plan
- to understand the advantage and disadvantage of a choice and function
- transformation from incapability and dependence to capability and independence

They also saw the structural problems faced by communities in terms of oppression (social, political, and economic), discrimination, and stereotyping. They perceived these as barriers that needed to be dismantled through acts of resistance. This is similar to Paulo Freire’s view of critical consciousness. The participants considered rallies and discussions with decision makers as acts of the resistance. To them counter-mapping is also a form of resistance, since Western-style maps are tools of oppression.

Knowing their backgrounds as activists within social movements, I expected the participants to raise these views. Their rural-based social movements entail community organizing with its nature of engaging in critical education for the adults so that the villagers understand their condition and stand up to voice their concerns. The movements also strive for collective action to resist the hegemony of the nation-state and the elite groups. Such social movements attempt to transform the unequal society into a democratic one, an attempt that is also full of contestations within it. As with the community, inside the social movements there are different ideologies, approaches, and tactics among the activists. Some engage in soft methods through the production of texts,
whereas others make actions on the streets. Some others may use both methods depending on their needs. As they are mostly close to indigenous peoples, decolonization of knowledge is also a part of their ideology as shown in their perception on the Western-style maps. However, this brings to a new question as they use cartography in their counter-mapping exercises. This presents an ambiguity among the participants, which may extend into the counter-mapping movement in West Kalimantan or even to many other parts of Indonesia.

5.2.5. Participation

The activists interpreted participation as involving all parties contributing funds, time, labor and knowledge. They also say that participation involves taking part directly, in terms of physical attendance, in the activities. Considering the ideological foundation of Pancur Kasih that adopts the teachings of Paulo Freire (see Chapter 4), this is rather surprising. In the discussion it was not clear what roles the community should have in decision making concerning mapping and in the post-production of the counter-maps. This particular issue was unclear from the beginning. The first project proposal that PPSDAK produced for grant application stated that all village members (men, women, and youth) being involved in mapping training, village meetings, counter-map verification, with all signing their names on the counter-maps (Atok, 2008, Part B), but how this was carried out was not clear.

Such an ambiguous conceptualization led to pre-determining what should be mapped in any of their mapping exercises, without much effort devoted to exploring community needs/interests. Mapping was seen as filling in a template, a practice which was understood as dangerous by some. This phenomenon is not unique to West Kalimantan, since it occurs elsewhere in Indonesia (Safitri & Pramono 2009). This practice is probably a form of consultation or placation on Arnstein’s (1967) ladder of participation. Nonetheless, this situation was acknowledged, although participants found it difficult to measure participation because of no clear indicators on the meaning of the term. Is it about the number of people and what they contribute? Or, is it more about the control over the mapmaking process?
5.2.6. Control and Ownership of Territory (Wilayah\textsuperscript{74})

The participants stated that adat communities have both communal and private property. Communal property (both adat lands and forest gardens) is generally owned by the whole community, be it from the same lineage or not, using adat (customary) laws. Adat lands are usually forests and sacred areas. The management of the lands are generally on the hands of adat leaders on behalf of the whole community. Private property can be obtained by an individual or a family through land clearing (generally for swidden plots) in the communal forest, inheritance, and barter. Private property is not, however, exclusive since the community or an individual can have a certain degree of control and access to a given fruit trees, particularly if the tree was planted by the community/family ancestors (cf. Peluso 1996). The same rule applies to communal property, particularly *tembawang*, under which individuals can have access to certain trees. Therefore, among Dayak peoples rights to land are stratified and not exclusive in the sense of Western property right regimes.

To show the stratification of land rights among Dayak peoples, I use an example from Wadley’s (1997) study among Dayak Iban of West Kalimantan. He observes two types of rights to lands that are operating. The first is the right of control that is divided further into the right to control access to land and the right to dispose of land. The second is the right of use of the individual families that involves primary, secondary, and tertiary rights. The kampung has the right of control, by deciding whether outsiders can have access to lands within its territory, and the right to dispose of lands not under the claims of individual families. Therefore, individual families have more rights to lands. It is worth to quote Wadley (1997, 100, emphases in original) at length to understand the complexity of these rights within an individual family that is called bilik (as most Iban live in longhouses):

*Bilik* hold both rights of use and the right of control. Land in which a *bilik* holds the right of control are also those lands in which it holds primary right of use. Some of these are lands acquired by the *bilik* from farming old growth forest or through partition with natal *bilik*. Other lands might

\textsuperscript{74}Wilayah here means both territory and area. The first meaning has a notion of power over space, while the second tends to be neutral. Furthermore, area in the discussion refers more to land plots rather than larger land area.
have been given to it by other bilik. A bilik holding primary right of use in land controls the use of that land by other bilik. It also holds the right of disposal in such land which includes the power to transfer both primary right of use and the right of control to another bilik within the longhouse or to outsiders. A bilik can sell its land to other households ... or to outsiders ... Additionally, bilik have secondary rights to request the use of land from bilik to whom they are related within the longhouse Tertiary rights of use are those that a bilik possesses in land controlled by related bilik in other longhouses.

There are a number of studies on the land and tree tenure regimes of the Dayak peoples75 that show some varieties of the regimes (e.g., Appel 1997). Based on their study on Dayak Salako and Dayak Taratn, Peluso and Colfer (1996) suggest that Dayak lands are divided into tembawang, tanah adat, and tanah usaha. Tembawang, which is widely known as forest garden in scholarly literature, is originally “the fruit gardens that commonly surround villages, traditional longhouses, or form or work hut” (Peluso & Colfer 1996, 125). It is a former settlement of Dayak communities where such fruit trees as pinang palm (Areca catechu) for betel chewing and strong-smelling durian (Durio zibethinus) are dominant as well as other edible species including illipe (Shorea spp, known locally as tengkawang or engkabang whose nuts villagers use as vegetable fat for cooking). Dayak peoples planted these species to support their lives. Due to natural disasters and or conflicts with other communities or families, a given community or family found a new place for their settlement. In addition to the trees, they left behind remnants of household utensils, jewelry, etc. The old place transformed into a forest pocket on which the community or family claims as their property.

Tanah adat (adat land) is “community forest reserves[,] which according to village histories, have never been completely cleared, or which were once cleared but have since regrown in mature forest because they presented poor conditions for agricultural productions” (Peluso & Colfer 1996, 125). Lands of this type also include graveyards (which in past often is under heavy vegetation) and extractive reserves, which are managed through planting, protection and selecting clearing of selected species. Appell (1997) calls this type as village reserve from which the villagers of the kampung

75 Many of them are published in Borneo Research Bulletin.
can open lands for their individual needs thus turning it into *tanah usaha* (enterprise plot).

*Tanah usaha* is lands controlled and managed by individual families. It can be considered as privately owned lands. Usually the lands are for swidden farming to grow rice and other annual crops. However, with the introduction of Para rubber the lands are planted more towards perennial species. For this particular reason, if in the past *tanah usaha* was reverted back to the kampung after being used for a couple of times (Appell 1997), nowadays it is now permanently owned by individual families.

The participants also discussed the relationship between adat communities and the state, in both colonial and independence periods. In their opinion the colonial Dutch East Indies government might have let the communities control their own land, but collected taxes from their economic activities. One participant pointed out that in Ketapang district government officials collected taxes (*belasting*, Dutch) from *damar* (resin) producing dipterocarp trees and issued tax statements for the lands where the trees stood. The communities interpreted this policy as the recognition of their rights. After independence, according to another participant, the Ministry of Forestry established Gunung Palung National Park but ignored the community’s claims on the lands. However, officials in the district office of the National Land Agency acknowledged the ancestral rights of the local communities. The standing of the forestry officials was unacceptable to the participants, who argued that the adat communities have existed before the state came to being.

### 5.2.7. Batas (Boundary)

The participants categorize *batas* (boundaries) into individual, *parenenkan* (lineage), and administrative. This may be confusing to others as a boundary is usually a way of communicating the limits of claims asserted by individuals or groups (Sack 1986). However, this understanding is plausible because the word *batas* to Dayak, at least in West Kalimantan, means a plot of land. Therefore, in this case the first two categories are actually forms of private property. When discussing boundary markers the

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76 The right holders of the first type are the members of an individual family which open the land, but other community members can access that land and even borrow for rice planting. The second type is owned by families of the same ancestor, in which the land is usually tembawang (forest garden) where the
participants adopted the common understanding by stating two types of markers: natural markers and perennial trees. They also noted that knowledge about boundaries was oral, usually involving showing individuals the markers.

5.2.8. **Pengetahuan Asli (Indigenous Knowledge)/Kearifan Lokal (Local Wisdom)**

Discussion of this keyword was also an interesting one and took more time than that for other keywords. At the beginning, the participants limited the discussion on *pengetahuan asli* to indigenous models of natural resource management or the history of the kampung, while that on *kearifan lokal* was limited to religious rituals involving requests for protection from the spirits. In a workshop organized by PPSDAK to evaluate its work, John Bamba, the director of Institut Dayakologi who was one of initiators of the mapping in West Kalimantan, questioned such an understanding (Anonymous, 2005).

We had a lengthy discussion on local wisdom that was seen by all as important. Participants perceived ritual as an essential beginning to any mapping exercise. This prevents the ancestors’ spirits from being disturbed so that their offspring can carry out the mapping without interruption. It is to ensure the safety and ‘undisturbed’ process of the activity. Though the performance of ritual is important and unique to mapping exercises, it seems to be due to fear rather than to a good understanding of local philosophy and values. Emphasis on such notion of fear bothered me as they did not come up with the essence of the terms.

After I questioned why they always referred to the fear of offending the ancestral spirits, a deeper definition of indigenous knowledge emerged. They defined it as an *accumulation of knowledge from generation to generation in shaping a culture and norms that exist in a community in their direct interaction with their environment*. Participants also noted that the basis of indigenous knowledge involved how human beings related to God (the Creator), with nature and among themselves. A participant stressed that Dayak philosophy of Dayak involves maintaining the harmony and balance between these three components. With such an understanding the spirituality aspect of knowledge, common among most indigenous peoples, exists among Dayak.
5.2.9. Documentation

In the discussion, participants identified documentation as referring to the process of transferring oral knowledge into a written format, a process that occurs in counter-mapping. It was intended to facilitate the maintenance of knowledge within the community. Current knowledge holders on adat laws and practices and oral history were generally of the older generation, whereas most of the younger generation did not have much interest in that knowledge. It is, therefore, a means of transferring knowledge from the old to the young. However, the participants identified a set of problems with this approach as the knowledge is then accessible to everyone, including those who can harm the community. Participants also realized that not every word in the local languages can be translated into bahasa Indonesia (Indonesian). Furthermore, documentation tends to freeze the social dynamics within a given community, especially their values and practices that affect, among others, their social (and thus property) relations, customary law, and rituals. Documents, such as maps, also become alien artifacts to the community producing the knowledge who tend to be an oral society.

The issue of documentation is about literacy, which entails the debates on literacy-orality divide and inscription of knowledge. As discussed earlier, modern societies consider literacy as a technology necessary to effectively function in the society. Orality is then considered to be of lower status as it lacks of technological progress. In effect, as Gee (1989) observes, literacy/orality divide – which is also dubbed as the great cognitive divide (Frake 1983) – as binary opposition has replaced civilized/primitive divide. The nature and problems of this divide, in my opinion, are the same as the scientific knowledge/indigenous knowledge divide. It is not only about discrimination, but also about the incompatibility of knowledge. Knowledge in oral cultures is generally expressed within the context of performivity and has deep social and spiritual meanings. Therefore, the transformation of oral knowledge into written texts has a high potential of losing the contexts and thus needs cultural sensitivity in its inscription process (De Souza 2003).
5.3. PPSDAK’s Mapping Methodology

The focused group discussion on mapping methodology took place at the PPSDAK office on 17-18 January 2007. All 12 participants were its staff members, most of whom joined the organization between 1995 and 1996, in which the methodology was being developed based on what the staff had learned earlier from other organizations. Among the facilitators who assisted the organization at the inception phase, Martua Sirait was very influential in developing what became the standard methodology. This occurred in 1996 during a mapping exercise in Tapang Sambas, a kampung east of the town of Sekadau on the main road to Sintang.77 The first mapping technique adopted was the method employed in Long Uli in which villagers were mere informants (see Sirait et al. 1994). However, PPSDAK considered this technique lacking in community participation as the researchers produced the maps and the technology was not user-friendly (Sirait 2007). It then adopted participatory research techniques, including participatory rural appraisal (PRA), to enable communities to take more active roles. It also employed simple mapping techniques, as introduced by Frank Momberg, using compasses and measuring tapes, in addition to GPS.

As a Dayak organization, PPSDAK integrated Dayak structures and practices into its methodology. It employed adat decision making mechanisms in the form of community meetings (musyawarah adat) and meetings of adat leaders (musyawarah tokoh adat) as a means of obtaining, respectively, consensus on and knowledge of the land. Furthermore, surveyors and the community recorded local land use with their boundaries supported with relevant oral stories, if available. Finally, adat rituals were also performed at the beginning and conclusion of mapping exercises.

Based on these inputs and thoughts, PPSDAK developed a methodology that can be divided into four sections: preparation, field survey, counter-map production, and delivery of counter-maps to the community. Although the steps are the same, Sirait

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77Martua Sirait joined the process when he was doing a research on the comparison between a government-sponsored community mapping and the mapping developed by Pancur Kasih for his master degree (Sirait, 1996). PPSDAK documented this process. Unfortunately, the notes were not available during this research.
(1996) has a slightly different categorization of the methodology (Figure 5.1). Natalia (2000), as a member of the organization, depicts the flow in more details (Figure 5.2).

Figure 5.1. Flowchart of mapping exercise in Tapang Sambas-Tapang Kemayau

Based on these sources (Sirait 1996; Haidi 2000; Natalia 1999; 2000; Pamasaroh 2001), as well as my discussions with NGO mappers, the following are the steps involved in the methodology. The following is the description and analysis of each step.

5.3.1. Initial Introduction to Mapping

Local communities obtained the information about mapping their lands from people affiliated with Pancur Kasih or environmental organizations who visited their
kampung. With increasing with greater access to elementary education at the desa level, the number of literate Dayak persons have also been increasing. Many in the communities became aware of mapping activities from print media such as posters and local magazines (particularly Kalimantan Review published by Institute of Dayakology and Gong Borneo published by PPSDAK Pancur Kasih). In addition, Kalimantan Review reported that the staff and management of credit unions were active in promoting mapping, especially on areas where land conflicts exist. Discussions about the idea took place in small groups among kampung leaders or organizers who later become the prime mover of the exercise. Discussions covered what mapping involves, the nature of the methodology, and the benefits and potential dangers of mapping to the community are (Natalia 2000, 63). In addition, the promoters of mapping projects would emphasize that the community is the “legitimate owner of the land” (Pamasaroh 2001, 2). Generally, a kampung meeting would be held to bring mapping to the attention of the whole community. This process is crucial as the decision to map their kampong should be agreed by everybody, or at least most of the villagers. Once the decision is taken, the community can either form a committee to implement the exercise or request more information from PPSDAK.

5.3.2. Request Letter to PPSDAK

Once the kampung agrees to have a mapping project, PPSDAK requires that the community submit a request letter. The letter contains a list of the people who agree to mapping, as well as their signatures. This is to ensure the commitment of the kampung to mapping. For PPSDAK the letter is important because it proves that the organization comes at the invitation of the kampung (Interview with Atok 23 January 2007). During the New Order period this was a crucial issue to avoid suspicion and suppression from the government and military apparatus. In addition, the letter enables PPSDAK to plan and allocate its resources.

5.3.3. Preliminary Visit

Upon the reception of the request letter, PPSDAK sends staff member(s) to visit
the kampung. In this visit the staff confirm that the kampung is indeed willing to carry out mapping and ensure that the community is committed to investing time and money. The visit also enables the staff to explain maps and mapping to the community. During this visit, staff encourages the formation of an implementing committee. The members of this committee, particularly its chairman, will act as the contact with PPSDAK. This committee collects funds and food from the community and coordinates the community members in the exercise.

5.3.4. Visit for Technical Preparation

In this visit, the PPSDAK staff establish, using GPS receivers, geo-referenced points on boundaries and important sites, and estimate the extent of the kampung. They also collect relevant information on demography, as well as social, economic and political conditions. Finally, they set up logistics and accommodation for the mapping team. This visit, which is often carried out simultaneously with the preliminary visit, enables PPSDAK to plan for the exercise.

5.3.5. Technical Preparation

PPSDAK assigns a facilitator (or facilitators), sometimes selected from its pool of community mappers, to lead the exercise. In this stage the organization prepares materials and equipment, including topographic map, large paper sheets, writing materials, sheets with a table to record geo-reference points, GPS receivers, compasses, and measuring tapes. With the adoption of computer-based mapping, compasses and measuring tapes are rarely used. The shift to computer-based mapping was to ease data management, accelerate mapping processes, and produce better map display to boost ‘prestige.’ Today laptop computers, LCD projectors and a large piece of white fabric to be used as screen have become necessary equipment. Community roles are thus reduced significantly after the digital technology steps in.

Until recently topographic maps of West Kalimantan were at a scale of 1:250,000. Constrained by such small scale map, PPSDAK made enlarged photocopies of the maps at scales of 1:25,000 or even 1:10,000. This is not a recommended practice, but the
organization had no other option at that time. Today Bakosurtanal has produced 1:50,000 maps, in both printed and digital formats. With digital topographic maps available, topographic sheets are only used in the office.

5.3.6. Implementation of Mapping

This stage is the core of a mapping project as this is when the surveying and counter-map production take place.

5.3.6.1. Musyawarah Tokoh Adat (Deliberation Among Adat Leaders)

This is an activity to determine the boundary of the kampung by retrieving the memory of community that was passed to them in oral histories by their ancestors or elders. As this is a delicate issue, representatives of neighboring kampung are invited to the meeting to avoid conflicts in the future. The meeting compiles stories about boundaries so a consensus can be reached in the form of a list of place names along the agreed upon boundaries with each neighboring kampung. The activity should be carried out with “care, goodwill, and openness” (Natalia 2000, 63), because if the meeting fails to reach an agreement, the mapping exercise cannot continue. In addition to talking about boundary, the meeting often covers the local natural resource management regime. All members of the kampung are expected to attend this meeting since it is also a forum to transfer knowledge of boundaries to the younger generation. This activity is likely to bridge the “serious generation gaps … concerning the knowledge of the history, territorial boundaries, ecology-based wisdom, and tradition in general. … [Through this everyone is] informed about their roots, their history, and their territory” (Natalia 2000, 63). An adat ceremony usually opens the process.

Since they are assumed to hold the knowledge of boundaries, adat leaders are the key participants of the meeting. However, those who regularly hunt also know the boundaries. These hunters do not always have a position in kampung leadership. The discussions trace the history of delineation of the kampung and identify place-names along the boundary. These should be agreed to by representatives from the neighboring kampung. The participants are divided into several groups (usually based on gender and
age), each of which transfers mental maps, particularly placenames along the boundary, onto a sketch map. Each group presents their map to a plenary session to produce a final list of placenames, which are written down on a paper.\textsuperscript{78} These placenames often include such areas as forest gardens, fallow areas, small hills, etc. The list will be typed by an activist of PPSDAK into an agreement letter (\textit{kesepakatan tata batas}) to be signed by the representatives of all kampung involved. Once these are agreed upon, the leaders of kampung and the representatives of neighboring kampung sign the list which will be the basis of the boundary surveys. This meeting also discusses the planning of the mapping process and selects villagers who will take part in the mapping training.

\textbf{5.3.6.2. Surveying and Drafting Training}

This training is crucial for the mapping exercise as PPSDAK considers the community as the mapmaker (Pamasaroh 2001,3). However, in reality this ideal is constrained with a number of factors. The participants are those who can read and write as the coming works require. Though men and women can join, the trainees are almost always men. The training, before the advent of computer based mapping, included sessions on how to read topographical maps, how to operate GPS receivers and compasses, and data processing. It took three or four days. If members of neighboring kampung are interested in mapping their land, they can join the training. These trainees will be the surveyors for the project. With the use of computer-based mapping technique, data processing is no longer taught as a GIS operator input the data and the computers took over the rest of the job.

\textbf{5.3.6.3. Surveys of Boundaries, Settlements, Land Use and Sacred Sites}

As in other mapping activities, surveying is central to the work. The surveyors are the community members who participated in the surveying training earlier. Other

\textsuperscript{78} Pamasaroh (2001, p. 3) describes that age and gender determine the mental maps. The youth focuses on the areas they explored and had heard from the elders, while the elders know the details of property holders. Men have detailed knowledge on the areas for farming, hunting and fruit collecting, whereas women are more proficient on the areas they frequently visit such as rubber gardens, areas for fuelwood gathering and fishing, and farming areas. In my dissertation research, I found that women tend to know areas along the trails to gardens and activities of women’s duty on food preparation as they are not expected to go far beyond the trails.
community members join this phase, especially as guides and resource persons for placenames. Hunters are generally the most knowledgeable person for this purpose. They are divided into a number of groups, led by a trained mapper to reduce the burden of the work and to accelerate the process. Each group has a GPS operator, note taker to record UTM coordinates, as well as other community members who are interested in joining. Depending on the size of the kampung, surveying can last from a day to more than a week.

In the group discussion I asked to staff members of PPSDAK how exactly boundary delineation took place during surveys. They explained that each group walk through the placenames agreed upon during the musyawarah tokoh adat. GPS operator and note taker wrote down the UTM coordinates of every station on a table provided by PPSDAK. Depending on the length of the boundary surveyed, a station was established every 50 m, but sometimes up to 100 m. For boundaries where a path exists, the team took coordinates along the path. For boundaries that are a zone or an area, the coordinates were taken depending on the characteristics of the places. If the boundary was a river, the team took coordinate in a place where the survey path met the river. They then walk along the river bank on the side that belongs to the kampung and take another coordinate when the path went left the river. On placenames of an area (forest garden, fallow areas, small hills, etc.), the GPS person took coordinates across the middle of that particular area. Should they find a steep hill, a coordinate was taken on the bottom of the hill where the boundary path ended. Then the group walked along the bottom of the hill and stop at an estimated opposite of the previous station to take another reading.

5.3.6.4. Crude Data Processing and PRA

Community representatives are then taught to transfer field data into draft maps and map land use through a PRA session. During this phase the mapping team also collects information on the history of the kampung. In this phase mapping facilitator(s) or community mapper(s) draft a map. When the process was done manually, the boundaries of the kampung are traced on a ‘millimeter block’ (graph paper) based on the geo-referenced points as well as making calculations of data taken from the surveys.
Then with persons who are considered knowledgeable (generally males), the mapping team draws a sketch map of local land use on a large paper. The categories are usually rubber garden, customary forest, forest garden, fallow areas, and current rice garden with their local names. This activity usually occurs inside a room, be someone’s house or classroom of local (elementary) school or a function hall. PPSDAK calls the process PRA, although it is only a partial application of what is considered to be PRA by other practitioners (Mascharenhas et al. 1991; Chambers 1994).

5.3.6.5. Preliminary Drafting in Kampung

The mapping team transfers the draft maps drawn on graph paper and the sketch maps of land use onto the enlarged topographical maps brought by PPSDAK from its workshop in Pontianak. In this step the mapping team writes down names of the rivers. In doing so the team often revises the course of the rivers that are drawn on the existing topographical maps, thus correcting the official topographic maps that contained inaccurate placenames and courses of the rivers. The resulting counter-maps show the shape of the kampung.

5.3.6.6. Counter-map Production

The draft counter-maps generated in the kampung are brought to PPSDAK’s bengkel pemetaan (mapping workshop) in Pontianak. The step described here is when ‘manual mapping’ (pemetaan manual) was employed. It is to produce “clean and detailed, technically correct” counter-maps (Natalia 2000) aided by a handful of community representatives selected from the pool of mapping training participants in the kampung. A number of trained community representatives are selected to participate in the final counter-map production. In the workshop the joint PPSDAK and community team copies the draft counter-maps onto tracing paper (Id. kertas kalkir) with a standardized format having a map legend at the right side and box for signatures at the bottom. The team also locates the place names and shades the counter-map to differentiate land uses. The lettering is done by tracing pre-printed transferable letters popularly known in Indonesia by its brand name, Rugos. In the process they also
calculate the extent (in hectares) of the kampung.

The maps produced in this step are:

i. Map of Existing Land Use (*Peta Tata Guna Lahan*)

This map gives a snapshot of the existing land use of the kampung. Usually it depicts areas of settlement, farming (both the current farms and fallows), forest gardens, and communal forests. The categories of land use are differentiated by different shading and have the number and percentage of the extent of each category. The map is important as it establishes the existence of the kampung through depicting the landscape that the community has created (cf. Mitchell 2003).

ii. Map of Animal Distribution (*Peta Penyebaran Binatang*)

This map records the distribution of animal species important to the lives of the local community, including those considered as pests. Information on pests is crucial in land clearing, so that the villagers can avoid areas where the pests exist. Local (vernacular) names are used.

iii. Map of Tree Distribution (*Peta Penyebaran Pohon Kayu Bangunan*)

This map depicts the distribution of tree species which are important for house construction. It can also be used to monitor the number of existing species and their volume. As with the animal species, the names used are those locally known.

iv. Map of Rivers and Streams (*Peta Daerah Aliran Sungai*)

As its name clearly indicates, this map records the rivers and streams in the kampung. In many cases the position and names of the rivers are incorrect on the state’s topographical maps, so this gives the community a chance to correct these mistakes.

v. Map of Sacred Places and Graveyard (*Peta Tempat-tempat Keramat*)

Sacred places are important to the local culture of the local communities and often contain plant species sacred to the community. The map is crucial so that these places can be preserved.
vi. Map of Settlements (*Peta Pemukiman Penduduk*)

The map shows the position of houses in the settlement, village roads and trails. It primarily depicts the houses in the main settlements, whereas the houses in the farmlands tend not to be included.

vii. Land Use Planning Map (*Peta Perencanaan Kampung*)

This map is produced from a planning session and shows how the community wants to have their land used in the future. The session is based on discussion of three separate groups (men, women and youth).

viii. Reference Map (*Peta Referensi*)

This is a map reproduced from the topographical map issued by state mapping agencies (National Coordinating Agency for Surveys and Mapping [Bakosurtanal] or Army Topographical Service). This is the map that is enlarged through photocopying from 1:50,000 (sometimes 1:250,000) map to 1:10,000.

ix. Three Dimensional Map (*Peta Tiga Dimensi*)

This map is created from layers of cut-out cardboard sheets which represent the contour lines of the topographic reference map. This model substantially helps community members to understand the contour of their land. Later, it assists the community to understand the geographical layout of their kampung and is useful in conducting planning sessions.

However, not all kampung have constructed maps for all these categories. Reasons vary, but time constraints are important. Every map has the legend is written in the local language, Indonesian and English.79 The use of local languages in map legends is intended to increase the sense of belonging within a given community.

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79 For the local language the word ‘map’ is translated as ‘kar’ for all the languages and dialects. This word is in fact an adopted version of Dutch word ‘*kaart,*’ which means map (H. Nazarius, personal communication, July 9, 1999). It might have entered into the vocabulary of some Dayak peoples when the Dutch colonial mapmaking enterprise came to map Dayak territories.
5.3.7. Verification of Counter-maps

This step verifies the contents of the counter-maps, particularly place names and spelling. Community representatives review the final drafts of the counter-map, either in Pontianak or back in the kampong. If mistakes are found, the mapping team at PPSDAK revises the counter-maps. Once approved, PPSDAK make copies of the counter-maps on tracing paper.

5.3.8. Counter-map ‘Ratification’ (Pengesahan Peta)

In this final step, PPSDAK hands over the counter-maps to the kampung, usually in an adat ceremony to signify the importance of them to the community, particularly the ownership. The ceremony consists of the signing of the record of counter-map delivery (penyerahan peta), the transfer of the materials documenting the history of the kampung, and the signing of the counter-maps by kecamatan and/or desa officials and community members. The signatures are a means for the community to proclaim themselves the owners of the counter-maps which reflect the landscape of the kampung. They are also to signify that those listed accept responsibility for the counter-maps (Natalia 2000, 64).

5.4. Toward Computer-based Mapping

As the state-of-the-art spatial technology became more available and affordable, coupled with the demand for increasing map accuracy, in the late 1990s PPSDAK adopted computer-based mapping and began installing GIS software in its desktop and laptop computers. A senior staff member of PPSDAK explained the reasons for the adoption of computer-based map production that included the following: easier data management, faster mapping processes, better map display that boosts ‘prestige’ (kemudahan manajemen data, proses pemetaan lebih cepat, mutu tampilan lebih baik sehingga mendongkrak "prestise") – similar to reasons posited by Sieber (2000, 776) that: “GIS may become essential to obtain grants and data, to create competing models, to ‘talk the talk’ of the bureaucrats, and to appear more scientific.”

For field activities, laptop computers replace a range of equipment and can handle data processing and map drafting immediately at the end of the survey. GIS technicians
with their GIS-installed laptop computers and LCD projector spend more time in the field as they input initial spatial information during the actual mapping activity. The geo-referenced data can be inputted in the field immediately after the surveying teams hand over the data sheets and land use maps. GIS technicia can type in geographical names (place names and names of the rivers) directly based on the information given by knowledgeable persons in the kampung. They can also show an initial version of the counter-map on a makeshift screen using an LCD projector. Technicians can readily estimate the extent of the kampung and of each land use type. Community representatives are no longer required to go to Pontianak for a final mapping workshop. The number of map sheets is reduced to one as GIS can handle layers of information easily. For counter-map verification, the GIS technicians print the final draft counter-map and send it to the respective kampung. With all these changes mapping facilitators do not have to spend much time in drafting maps. Much of the burden of mapping shifts to the GIS unit that processes and integrates all spatial information. The unit has ‘GIS champions’ (cf. Sieber 2000) who have to handle all the data and can get easily burned out due to the massive workload. However, the adoption of this new technology creates unintended problems which I will discuss later in this chapter.

After mapping a kampung, PPSDAK usually launches a number of activities: facilitation of adat consensus about natural resource management, the production of a book about the adat community (which can also be considered as an autoethnography project), the strengthening of adat/desa institution, and education on critical thinking (especially on political roles of the community and environmental awareness). This work is implemented by the PPSDAK’s division concerned about the strengthening of adat land (penguatan kawasan adat- PEKA). The meeting about adat consensus generally takes place after the delivery of counter-maps to the community. The agreement achieved in this meeting and the history of the kampung is then usually published in a book with author(s) recruited from community members, usually the leaders of the kampung or community mappers who live in the kampung.
After discussing the conceptual foundation and the methodology of counter-mapping of PPSDAK, I now move to actual cartographic encounters using the example of the mapping exercise with the Maap people.

5.5. **Maap Spatial Knowledge**

The Mahap people, as other peoples in the area, depend on rivers for their livelihoods and for transportation. They orient themselves in their landscape using rivers. Their landscape centers on the *kampokng rurokng* (main settlement area). The rest of the landscape is dominated by markers of movement. Based on my observation and interviews with the villagers of Pait where I focused my fieldwork, I identify at least three major components of such movements. The first is *gupukng temaakng* (forest garden), where human settlement once existed. Movement was a common phenomenon among Dayak who moved to new settlements when there was a war, outbreak of disease, a disaster or when the land could no longer support them. An *omah botakng panjang* (longhouse) was built at the new location. Abandoned settlement sites then reverted to jungle, but contained a significant number of useful trees that the community had planted during their inhabitation. These tree species include durian (*Durio zibethinus*), jackfruit (*Artocarpus heterophylla*), betel palm (*Areca catechu*), coconut (*Cocos nucifera*), and illipe (Mp: *ngkabakng*, *Shorea* spp.). This area then became a communal *gupukng tema’akng* (forest garden). Since the early 20th century, however, Maap have become more sedentary. Abandonment of the longhouse and the introduction of Para rubber are at the core of this change. The settlement pattern has become one of rows of individual houses along a path, road or river. With such change, Maap communal *gupukng tema’akng* date to the first half of the 20th century and *kobutn gotah* (rubber gardens) became new forest garden category.

Second type of marker is swidden farms with their different stages of ecological succession resulting from the rotation of land plots for dry rice farming (see Figure 5.3 and Table 5.2). Maap people grow dry rice on fallow lands under old secondary forests or on newly cleared plots in communal forests which are cleared using slash and burn technique. The land plots (*bolah*) are individually owned and recognized by other
Figure 5.3. A typical succession of swidden farms (Source: Gouyon et al 2000, 69).

Table 5.2. Successional stages of Tayak

<table>
<thead>
<tr>
<th>Age</th>
<th>Name</th>
<th>Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td><em>Umé</em></td>
<td>Under planting</td>
</tr>
<tr>
<td>1</td>
<td><em>Rampakng padi</em></td>
<td>Just planted a year earlier</td>
</tr>
<tr>
<td>2-3</td>
<td><em>Patah parakng</em></td>
<td>Bamboo started to grow</td>
</tr>
<tr>
<td>4-6</td>
<td>?</td>
<td></td>
</tr>
<tr>
<td>6-8</td>
<td><em>Tanah malakng mudak</em></td>
<td>Secondary forest</td>
</tr>
<tr>
<td>10-12</td>
<td><em>Tanah malakng tué</em></td>
<td>Secondary fores</td>
</tr>
<tr>
<td>12-15</td>
<td><em>Ngkaboh mudak</em></td>
<td></td>
</tr>
<tr>
<td>&gt; 20</td>
<td><em>Ngkaboh rimak</em></td>
<td></td>
</tr>
<tr>
<td>&gt; 30</td>
<td><em>Rimak</em></td>
<td>Fully-grown forest</td>
</tr>
<tr>
<td>&gt; 50</td>
<td><em>Rimak agung</em></td>
<td>Old growth forest</td>
</tr>
</tbody>
</table>
community members. The plots are often far from the owner’s kampung. In the past after
harvest a plot was left to fallow for up to 15-20 years. Re-growth went through several
ecological succession stages, which show how recent the tayak (fallow areas) was used.
Each of these stages has its own term. When attending the plots, individual families often
constructed a hut called a pemalapm.\(^{80}\) In the past illipe (Shorea spp.), jelutung (Dyera
spp.) and damar (Shorea, Balanocarpus, and Hopea) trees were planted, but today most
of the tayaks are rubber gardens. Planted with variety known as karet alam,\(^{81}\) the gardens
could last up to 70 years. When a hut was abandoned, the area could become a gupukng
tema’akng (forest garden), but it is individually owned. These lands are claimed by an
individual or a family, land claims that the Maap call the pemogi pejalatn of the person or
the family. It is similar to tanah usaha according to Peluso and Padoch (1996). The term
also applies to the areas where the Maap hunt and collect honey. Pemogi pejalatn can be
either within the boundary of their own kampung, but also in other kampung (both Maap
kampung and those of other Dayak people). The distance is usually a day’s round trip
journey. However, hunting areas can be further away. Such land use practice is similar to
those among the First Nations in Canada (Tobias 2000).\(^{82}\)

Although private property exists, it is not absolute, especially for the individual
tema’akng where different types of access to land or trees can exist. On these ‘owned’
lands, other persons or families may have claims to trees that they or their family planted
and maintained. The rights to trees can be the right to ownership or the right to harvest,
and can be passed on to their children. Such practices are common among Dayak peoples
(see for example Peluso 2003). Therefore, there can be several layers of claims or
bundles of rights pertaining to an area of land.

\(^{80}\)In many instances some families built huts close to each other. Slowly the area transformed into a
settlement. The inhabitants could announce to break free from their affiliation with their original kampung
and set up a new kampung.

\(^{81}\)The term literally means natural rubber, a term used in English generally to refer to all rubber tapped
from rubber trees as opposed to oil-based synthetic rubber. The use of the term among the rubber farmers is
to differentiate the variety from the clonal rubber of high yield varieties (karet unggul) introduced much
later, particularly in 1980s.

\(^{82}\)Except for hunting, the first person(s) who does one of these activities can make claims as primary right
holder(s), or even owner(s) for farm lands. Anyone else who wants to access to the honey trees (primarily
tapakng, Koompasia excelsa [a legume species]) and illipe trees as well as using tayak (fallow lands) has to
ask the right holders for permission prior to making any action. Anyone who fails to do that will be
sanctioned and is required to pay adat (customary) fines in a ceremony.
The third type of marker involves hunting and includes *ntirukng* (temporary hut) and trees markers during a *mongkal* (hunting trip). Hunting can take place in *tanah adat*, either forest within or beyond kampung boundaries, or within another family’s *pemogi pejalatn*. Hunter’s take most large animals, although the most favored game are wild boar and deer. The areas that are suitable for hunting are called *pemongkal peajuk*.

Hunting has been an exclusively male activity for males. Because hunters are away for several days they build *ntirukng* from branches cut from the trees around the site and roofed with bark or large leaves. Today the roof is made of plastic sheets. Hunters mark trees by cutting out a slice of tree bark or bending small trees in the direction of their movement, which is important for way-finding.

Landscape is also dotted with common areas, particularly *gupukng* (‘forest islands’ or forest patches). These provide food and building materials for the community and they provide lands to be converted into new *umé*. Often times, burial grounds exist within these forests.

Maap people also have a number of spatial terms. First, the word *raat* is used to describe the size of an area difficult to measure, as in *utatn raat* (large extent of forest). The word can also be used for much smaller area, for instance a position on a table. The word also refers to the territory in the following phrase, *raat kité Maap*. An often used phrase is *utatn raat tanah aik* which seems to refer to the surroundings. The word may have richer meanings, but unfortunately, I only found out about the importance of the word, *raat*, when I was about to finish my study. \(^{83}\) For the time being, it is probably suffice to say that the term refers to both object and place (Burenhult & Levinson 2008, 137). Other spatial terms include *kampokng badah* and *kampokng rurokng tanah aik*. The former refers to the whole territory of Maap people, whereas the latter to the settlements along a river. These terms are thus an expression of territoriality among Maap.

In demarcating their kampung, Maap use both natural and anthropogenic markers, including river, *mungguk* (small hill), *tema’akng* (forest garden), and *tayak* (land parcels under fallow). However, the favorite marker is the honey tree (*tapakng, Koompasia excelsa*, see Figure 5.4). Knowledge on their pemogi pejalatn (including their boundaries)

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\(^{83}\)The term deserves further study.
is practically a gendered knowledge. It passes orally from generation to generation when men are hunting (*mongkal*), an activity females do not take part. Women, therefore, tend only to know their own settlement (kampokng rurokng) and the areas along the paths to and in their gardens.

Figure 5.4. Tapakng (*Koompasia excelsa*), note the ladder on the right picture

The transmission of knowledge on pemogi pejalatn occurs orally through participation in hunting trips. By repeatedly hunting with his father or his grandfather, or other older male members in his family, a boy gains knowledge of the position and names of the rivers and hills. Along a river the following directions are used: *kiba* (left), *kanan* (right), *kuluk* (going upstream), *kilik* (going downstream), *karat* (going to higher ground or hill), and *kalomang* (going toward the river or lower ground). When boys are able to hunt on their own, they use memorized information to orient themselves. If they get lost they will follow a river until they meet a river they remember. Once back in the kampung, they ask other men about the position of the river and hills. Men thus construct
mental maps of the areas claimed and used by their people, through an apprenticeship and through memorization. This process also means that men develop wayfinding knowledge.

I participated in one survey in the Sekadau watershed to establish a dusun boundary, which provided me an insight into how wayfinding and navigational knowledge develop. With two villagers and a community mapper, I went to a location where the boundary survey began. Another surveying team also went with us to the site. Both teams left in opposite directions from this site. A villager in my team was a hunter whom the head of his dusun had requested to identify the boundary line, whereas the other was a farmer. Along the way I noticed that both villagers made markings on the big trees by cut out a small patch of tree bark using their parang (similar to machete). They also bent small trees in the direction of our destination by cutting the trunk half way and pushing them with their hands. Along the way I spotted old markings on the trees or bent trees that had new growth on the bending areas. Once we arrived at the site where coordinates had already been taken, we went back to the hut where we stayed during the survey. The hunter decided to take a short cut, a different path that we took earlier. We went up and down a few hills and arrived at a stream. We followed the stream and met larger one. After about an hours walk along the stream we climbed up and down a few more hills. Along the way the hunter searched for markers other people or he had made and finally arrived at the hut.

This suggests that two theories of way-finding, as Gell (1985) proposes, are used at the same time. The first uses mental maps which people store spatial information in their mind. However, it does not involve “abstract representation of spatial relations” as researchers on this subject suggest (Gell 1985, p. 273). Rather, the knowledge accumulates in a person’s mind through practical mastery, which is “informal, subjective, and based on habit and familiarity.” Gell suggests (1985, 273) that this is the second system of way-finding.

A community mapper is a person, usually male, who assists the Pontianak-based NGO in mapping. The mapper is also a villager who had some basic training on mapping, particularly how to operate GPS receiver and to conduct interviews or meetings for the mapping exercise.
5.6. Geographic Translation in Action

The first counter-mapping exercise in the kecamatan of Nanga Mahap was in Cenayan in May 2001 after the community of the desa sent a request to PPSDAK in June 2000. The community wanted to protect their lands from expanding oil palm plantation. They learnt about mapping from their neighboring desa, Nanga Engkulun,\(^{85}\) when their representatives were invited to discuss the boundaries of both desa during a mapping exercise (Hermanto 2008, 91). The camat (head of kecamatan) of the area organized a seminar on spatial planning for the town of Nanga Mahap in May 2002 and invited PPSDAK to facilitate the meeting. Under the strong influence of PPSDAK, the leaders of the desa agreed to map all desa in the kecamatan and to begin spatial planning for the kecamatan. Mapping took place in many kampung after that. But it was not until after JKPP became involved in the process that an intensive work began to produce a spatial plan for the kecamatan.

Sebabas, a Maap community, was one of the desa mapped. A post-mapping report produced by PPSDAK (Anonymous 2003) as well as my interviews with PPSDAK staff members and the villagers of Sebabas involved in the mapping exercise provide the information on which my commentary is based. Mapping in this desa was inspired by the 2002 seminar. In early September 2003 the desa head went to PPSDAK office in order to present a letter requesting the mapping of his desa.\(^{86}\) Around the same time, some community members also learned about mapping from the bulletin published by PPSDAK, Gong Borneo. PPSDAK agreed to carry out mapping with funding from Jakarta-based Yayasan Kemala (Anonymous n.d.), which managed the USAID-funded Biodiversity Support Project in Indonesia. The communities of Sebabas also collected Rp 10,000 per household to help fund the project.

Two weeks later PPSDAK sent five staff members and three community mappers from the kecamatan of Nanga Taman, just north of the kecamatan of Nanga Mahap, to Sebabas. They were all indigenous persons themselves and thus were familiar with

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\(^{85}\) The home desa of a staff member of PPSDAK.

\(^{86}\) The desa head saw mapping as “the source of community’s strength, a weapon to protect their lands” (Rafael 2007) from threats from commercial large-scale resource extraction was obvious. For example, in 1996 PT Kalimantan Oleo Industry had approached the community of Sebabas to sell their lands for oil palm plantation, but the latter was not willing to surrender their lands.
indigenous methods of way-finding and Dayak tenurial systems. They facilitated a mapping exercise that took place between September 13 and October 14, 2003.

Mapping started with the musyawarah tokoh adat (deliberation among adat leaders) on September 14-15, 2003 in the balai desa (function hall of the desa). In this session the head of PPSDAK’s mapping division explained to the participants of the meeting: “… we from PPSDAK not the only one who produce the maps, but all of us. So that you all can also understand the maps and how to make them” (Anonymous 2003, 4). He further stated that “in each dusun not only PPSDAK’s team and the participants of (mapping) training who can conduct mapping, but all community members both men and women, and doesn’t have to be the unmarried ones. Why community has to take part in this mapping process? It’s because the community owns the maps.” However, for those who could take part in the surveying, he stated that: “only those who are healthy can join, because the surveying team has to work into the forests. Those who will be selected also have to know the area. Don’t let anyone who doesn’t have good knowledge of the area join the team.”

After discussing the nature of mapping and other matters, the activities began by grouping the participants into seven groups based on their kampung (or dusun using the present administrative term, as PPSDAK records in its report). Each group drew a sketch map outlining their kampung boundaries and wrote down the place names along the boundaries. These place names have historical meaning because in the past neighboring kampung had settled their territorial claims by using them to establish boundaries. This history is critical to the kampung’s claim (Rafael 2007). During this work, the first phase of geographical translation took place. The placenames include terms such as mungguk (hill), gupukng, and bunus (hill ridge) that do not establish linear boundaries or, as Deddy (2006, 104) puts it, “do not usually form neat lines.” The sketch maps produced had only (dotted) lines as boundaries, but areas with their poligonal shapes were not drawn.

After everyone approved the list of place names, the team from PPSDAK produced an official summary document. This document contains three sections: an introduction (including the legal foundation of the agreement), the agreed upon boundaries (including agreements with neighboring kampung and common place names),
and an end section (containing possible revisions and the signatures of those who attended the meeting and approved the agreement in an annex). I could not find the attendance list of the meeting to find out whether or not women participated. The fact is that all the signatories were males. The desa head and the adat head signed their names to acknowledge the agreement. In the introduction the summary describes the purpose of mapping, i.e., “(a) to record and protect local knowledge, (b) to increase community sensitivity, (c) to plan and manage natural resources, (d) to enhance local capacities, and (e) to strive for a recognition of land rights” (Anonymous, 2003, 6). At the end of the meeting, the participants discussed the Maap version of the counter-map legends.

The next morning (September 16, 2003) the community representatives and the mapping facilitators attended an adat ritual, barimah, at the mouth of a small river. The ritual was to let Daté Petaré (the Creator) know about the mapping activities and to ask for blessing so that the work could proceed without significant disturbance or constraints. Although women were present at the event, they did not participate in the ritual only serving the food. Only men were acknowledged as participants. The event started with the consumption of rice wine sipped by a group of four men from a big clay jar. Then the males sat face to face on two parallel logs and had chicken soup, sticky rice, and sweetened glutinous rice cake (cucur). At the end, the kepala adat said a prayer in indigenous religion.

In the afternoon of the same day, the 14 community representatives selected earlier began their training on mapping basics led by mapping facilitators. Because the training requires literacy and calculation skills (arithmetic), the participants were young people, mostly male. Most of them had high school education and were from the élité group. The topics included the definition of a map, scales, topography, contour lines, map orientation, map legends, and map coordinates. The next day they had basic training in the operations of handheld GPS receivers and compasses. This started with a classroom session on the introduction of GPS technology and how to operate it. Then they practiced the operation of the receivers in the settlement of Sebabas with the assistance of the mapping team. They then went back to the meeting room and transferred the geo-referenced points onto a copy of a topographic map with a scale of 1:20,000.
(enlarged by photocopying from an original map with the scale of 1:250,000). After lunch they had a session on compass operation following the same procedure. The trainees were then sent to survey the boundaries of their respective kampung.

Boundary surveys took place in all seven kampungs. Before the surveys started, a form of adat ritual called *ngudas* was also held in all kampung, except one. Just like *barimah*, this ritual was to ask permission from the spirits and for protection from the Creator, but was carried out at the starting point of the survey. Women did not participate in this event,\(^\text{87}\) as only men took part on the surveying. The surveying team was then ready to work. The team consisted of the land owners (of tayak or tema’akng) along the boundary, a participant of the mapping training, a community mapper, and a PPSDAK member. The first group (land owners) included hunters as guides for the team. The team was led either by an NGO member or a community mapper. In collecting the information two persons were crucial: the one who handled handheld GPS receivers to obtain the georeferenced points of the surveying spots, and the other was who recorded the coordinates (and the description of their surroundings) on previously prepared forms. They took survey points every 100 meters.\(^\text{88}\)

As explained earlier, if a surveying team finds such a polygonal-shaped area as forest garden and a small hill, PPSDAK has a common practice to take UTM coordinates across the middle of the given area. With its emphasis on boundary delineation, the activity conforms with Western private property regime from which the technology evolves. Meanwhile many spatial features along the boundary take the forms of area with complex property relations. Tema’akng, for example, can have multiple rights on it. Cutting through the middle of it can lead to conflicts among its right holders. Because of this emphasis, boundaries that had previously in the forms of area have now turned into lines. This is clearly a form of geographic translation as the surveyors transformed the complex spatial features embedded in the area into simple boundary lines.

\(^{87}\) Group discussion with women group, May 28, 2007.
\(^{88}\) Group interview with mapping team of Sebabas, June 1, 2007
Concurrently, in the village a team, usually of the older men, gathered in a PRA session to work on a sketch map of land use (Figure 5.6). The sketch map generally contained the river courses to make it easier for the team to locate areas within the land of their kampong. They placed different land uses, particularly settlements, swidden fields, rubber gardens, forest gardens, and communal forest on the counter-map. As it was based on mental maps of the participants, these land use types were only located approximately. This information was subject to geographical translation during the process.

The counter-map was also incomplete in term of the comprehensiveness of the knowledge as only men’s knowledge was included. In a group discussion with the women of Pait in mid December 2007, the women criticized the contents of their settlement map because it did not include several water bodies, important to them, close to the settlement. Men tend to know their pemogi pejalatn outside the settlement, and the
counter-map had good details in those areas. Women, on the other hand, have intimate
knowledge within settlements.

![Figure 5.6. Working on sketch map during PRA session](image)

After finishing the surveys, PPSDAK selected six representatives of the desa,
each representing a dusun and who had been a participant in the mapping training, to go
to Pontianak to both assist with, and be involved in, the counter-map production process.
However, in an interview on May 28, 2007, the temenggung was unhappy with
PPSDAK’s decision to take only younger men to Pontianak, claiming that they did not
have sufficient knowledge about the territory. During their stay in Pontianak, PPSDAK
gave each of them Rp 25,000 per day for meals.

In this phase the desa representatives drew the boundaries of each kampung on a
piece of tracing paper. They calculated manually the boundaries based on the notes of
geo-referenced points and the readings of compass bearings. They also transferred the
land use of each kampung from the sketch maps made during PRA sessions onto a draft
counter-map using the topographical map of the area. They then marked different
categories by tracing pre-printed transferable signs. This process transformed
approximate locations into fixed locations, another act of geographical translation. On
this occasion PPSDAK’s mapping team also checked other information with the desa
representatives, including clarifying the spelling of place names. Each dusun had a set of four counter-maps prepared: a reference map, a land use map, a settlement map, and a map of the river system and sacred sites. This set was less than half the usual set of nine maps produced through manual processing.

Afterward the community representatives went home and engaged in their daily lives. Later GIS technicians digitized all spatial data, both from topographic map published by Bakosurtanal and the counter-maps of kampung produced manually. For rivers, the technicians took data from the topographic sheet. Once this was completed, PPSDAK sent the draft counter-maps to the communities of Sebabas for verification. After those involved in the mapping in the communities agreed, the GIS technicians printed the final counter-maps, which had signature lines for each household, desa and dusun heads, and camat (kecamatan head).

Figure 5.7. Boundaries of the desa of Sebabas from the counter-mapping exercise

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Bakosurtanal is an acronym of Badan Koordinasi Survei dan Pemetaan Nasional (National Coordinating Agency for Survey and Mapping), a national government agency that is responsible in mapping the country.
Upon the finalization of the counter-maps, a few months later PPSDAK delivered the counter-maps to the communities of Sebabas. Following its common practice, PPSDAK encouraged Maap community to revitalize their adat governance and laws. Prior to delivering the counter-maps, PPSDAK and the leaders of Sebabas held a two-day workshop on 13-14 May 2004 in the dusun of Pait to reach a consensus on the rules of natural resource management. The workshop included topics on social relations, natural resource management and environment, education, economy, and the implementation of adat laws. Although other issues were important, most attention was devoted to Maap customary law (Anonymous 2004). This event also marked the “canonization” of adat law as it transformed oral law into a written document, an attempt started by the Dutch colonial legal scholars. Fasseurs (2007, 58) fears that this process can lead into “simultaneous fossilization … [because] it could then no longer accommodate itself to changing circumstances and local needs.”

The day after the workshop PPSDAK officially delivered the counter-maps to the communities of Sebabas. This involved a mix of official ceremony and adat ritual. The participants of the ceremony were officials of the kecamatan of Nanga Mahap, officials of the desa and dusun, members of PPSDAK, and community members. The ceremony started with the welcoming of guests in an adat ceremony which included the cutting of a bamboo pole and the serving of rice wine. It started with one barimah ritual and ended with another one. An adat leader led the ritual by asking for the blessing from the Daté Petaré. After several speeches, the core of the ceremony started. The officials signed their names on the counter-maps as did the community members. Then PPSDAK and the desa and dusun officials also signed the records to formally acknowledge the counter-maps. Finally dusun heads then each received a set of counter-maps. Dusun heads were to be the keepers of the counter-maps, and were to make them available on request.

PPSDAK’s team came back in September 2004 to deliver the Maap adat law book. At this meeting a leading figure from Pait, who is the son of the former kepala kampong, was elected temenggung, although he was not present during the discussion. The temenggung’s roles include the implementation of adat law, coordination of adat leaders, and organization of the adat assembly.
Figure 5.8. Signing of the counter-map by a government official during a traditional ceremony (Photo: PPSDAK)
Apart from asserting the rights over their lands from the incoming oil palm plantation (PT Arvena Sepakat), the maps were not much used in daily lives (an issue I discuss later in the chapter). It was not until a joint initiative of JKPP and PPSDAK to develop a spatial plan for the kecamatan in 1996 that the maps were used meaningfully. The initiative was to map all eleven desa in the kecamatan and to conduct socio-economic research. Outputs of these works fed into individual community planning session in each desa to be compiled and analyze to produce a spatial plan of the kecamatan. It was also a follow-up of the spatial planning exercise for the town of Nanga Mahap mentioned earlier. The JKPP-PPSDAK joint team, with the assistance of a Depok (West Java)-based NGO and a Sanggau (West Kalimantan)-based NGO, launched a relatively massive mapping project for an Indonesian NGO standard followed by community planning session in each desa. As I mentioned earlier, I took part in some of the mapping exercise and community planning sessions during my research. The outcome was a document of spatial planning of a high standard that the district government of Sekadau might have not been able to produce due to its limited capacity as a new district. After a series of village meetings and two workshops of all representatives from all desa, in late 2007 the document was submitted to the district government only to find the outcome of the hard work was a mere input as there was no clear follow-up plan proposed. Learning from this failure, JKPP updated the information in 2011 and worked closely with the district government from the beginning of the new project. The bupati found the result satisfactory and intended to replicate the work for other kecamatan in the district.
5.7. Community Perceptions on Counter-mapping

During my research I talked to several groups (including elite males, females, and the younger generation) about counter-mapping. I did it mostly in Pait. I discussed with these groups the activities involved in counter-mapping and its impacts upon them. To begin with, I want to particularly show the perspectives of women and the young, who did not participate actively in the exercise.

The women, who belong to the state-sponsored PKK family empowerment group, listed the objectives of mapping as:

- to determine the boundaries between kampungs
- to determine the actreage of their kampungs
- to protect the property rights outside their kampung boundaries
- to defend their kampung for the future generations

During the mapping process women saw many aspects of it. They saw the *ngudas* ritual (*berima* in PPSDAK’s report) before the men formed groups to enter the forest. In the forest they saw the beibu ritual to keep the omens away. Later they saw the delivery of counter-maps in a ceremony during which the desa head gave the counter-maps to the dusun heads. In the ceremony some elder women danced to welcome guests. Women also knew about the three-day workshop and they knew that a number of community representatives went to Pontianak to finish the counter-maps. But women lacked an understanding of what actually took place during the mapping process which clearly shows that the women did not take substantial role in the exercise. Although they attended the introductory meeting on mapping and the preparation for mapping, they admitted that their primary role was to provide meals for the participants.

My research also confirms the dilemma of counter-mapping. The communities of Sebabas mostly considered mapping as beneficial, but at the same time concepts of space and property changed dramatically. Counter-mapping increased the sense of security about property rights. In an evaluation session conducted in 2005, PPSDAK listed the benefits: the community can protect their customary lands; they comprehend their territory and the rights attached to it, they can take immediate actions to protect individual rights against threat from outside (PPSDAK Pancur Kasih, 2005, 3-4).
Mapping also positively transformed a sense of identity within the community. The then the community. Then, the acting desa head of Sebabas, for example, argued that a desa should consist of a single adat group (a people). According to this sense, Manjang which is also a Maap kampung, should be a part of Sebabas. Further, for the village government the spatial information is important in working on its monografi desa, particularly on the extent of the desa (Rafael 2007).

The increased sense of security was very obvious in my research. In an interview on early June 2007, the mapping team considers that “mapping makes our tenure complete” (pemetaan menyempurnakan penguasaan wilayah) because outsiders have to ask permission (bebasê) to use the land. For example, the villagers from the neighboring desa could no longer open new bolah in Sebabas without permission. They felt more secure in using the lands as the maps provided accurate boundaries. But on the negative side was that the tanah usaha (pemogi pejalatn) belong to the villagers of Sebabas in other desa were no longer accessible. Boundaries thus became fixed and hardened.

This latter matter has a downside. Recently, two neighboring dusun had conflict over the cutting of ironwood (Euderoxylon zwageri). The dusun of Manjang formulated a regulation to collect levies from the timber cut in its jurisdiction. The dusun of Pait, many of whose residents were cutting trees in the neighboring dusun, claimed that they cut trees in their pemogi pejalatn; they, therefore, did not have obligation to pay the levies. The residents of the first dusun had moved from the second, so they are of the same lineage. Mapping tends to raise the sense of identity within the population of a given kampong, but at the same time it alters the concepts of property. The statement of a young farmer from Batu Koran clearly shows such notion: “It is true that the farms in upper Kenyabur River are the pemogi pejalatn of Pait villagers based on the works of our ancestors. It is now, however, the territory of Manjang based on the map. The community of Pait should ask for permission from Manjang community.” However, the exercise also helped settle some disputes. For example, the boundary between Sebabas and the

90 Interview, May 24, 2007
91 Monografi desa is a document on the basic (spatial, demographic, social and economic) information of the desa which is updated annually. The desa officials only need to fill out a series of tables in a book format.
kampung of Sungai Mayong in another desa was previously in dispute as villagers of the neighboring kampung cleared the forest. After mapping they agreed to leave the forest as *hutan tutupan* (closed forest), even though the boundaries were now fixed.

Apart from the direct impacts of mapping, there are other impacts from the follow-up process. These especially relate to natural resource management. The main issue was cutting down trees for commercial purposes, an activity that the *kesepakatan adat* (adat consensus) of Maap people – adopted during the PPSDAK-sponsored workshop on natural resource management among the Maap people as a follow up to the mapping exercise – clearly forbade. During my research everyday I saw young men carry sawn ironwood timber through the main road to the house of a local trader. The trader is a Javanese, married to a schoolteacher from the elite group in the community. He shipped the timber to Nanga Mahap to be sold in Sekadau. Smaller scale timber trade was also carried out by adat leaders, many of whom obtained contracts for construction. In some instances they cut timber for the construction from their own lands, but also from communal lands.

The other issue was related to the expansion of oil palm plantations. Some families in the kampung of Sebabas sold their lands to PT Arvena Sepakat, an oil palm concessionaire. Despite the fact that one of the main reasons for mapping the lands in Sebabas was to protect against oil palm expansion, no one could prevent the sales because the lands were tayak belonging to the individual families. The notion of unity shown by the counter-maps they produced earlier is, therefore, very weak, as the reality was indivial families might have different interests and needs. The kepala adat of the desa was even among the first to sell lands. One of the main reasons for accepting the plantation was to have better roads. The key figure in land appropriation was the adat leader of Riapm Batakng, a Maap kampung within the desa of Nanga Suri. The case was different with another oil palm company, PT Kalimantan Oleo Industry, which operated earlier. Those who sold their lands claimed them back after the company went bankrupt.

In both instances the common property regime did not work well. The rules in the form of communal consensus taken in a *musyawarah adat* (adat assembly) were available, but the adat structure, the institution which was supposed to implement the
consensus, failed to work. The adat leaders who were supposed to enforce the consensus even took part in the violation of the agreement. Another instance of failing enforcement is related to fishing using potassium cyanide (known to the area as *nuba potas*). Women in particular claim that the practice continues to exist. The problem is weak enforcement of the rules, a matter many scholars identify (e.g., Ostrom 1990). The adat structure functions in communal affairs (particularly adat rituals and communal works) and in such behavioral misconducts as adultery and theft, but has eroded in matters dealing with resource use.

The economic motives behind having the desa mapped were most likely the reason, though not the only, of such a conceptual shift. In introducing the idea of mapping, PPSDAK usually emphasized the economic costs and benefits of claimed lands. The awareness of limited land increased after mapping, especially after the villagers knew the extent of their desa. Prior to that villagers tended to think that the lands were limitless. Such a shift in perception might contribute to the shift in the conceptions of property.

The counter-maps, however, have been rarely used in public discussions. They are kept by the (former) dusun heads, rolled neatly in their cupboards. Many villagers, including women, have never seen, let alone inspected, the counter-maps. When I showed the counter-maps I borrowed from the former dusun head in Pait, many women and teenagers saw the counter-maps closely for the first time, three years after the mapping was carried out. In discussing their lands and desa the villagers tend to use their mental maps, something they are familiar with. It seems that the counter-maps serve the goal of securing land claims, but they are less important in daily life. Villagers have reverted to their oral forms of spatial knowledge to understand and plan land use. The counter-maps are targeted more toward outsiders, as a tool of negotiation when an incoming individual or entity has an interest in using or appropriating lands in the kampung.

From the limited use of the counter-maps, there was also no clear protocol on their utilization either. In a discussion with a group of women on the contents of the counter-maps, a woman said that one could use the counter-map with the consent of a kampung elder who later informed the community about it. Such arrangement is
susceptible to abuse, because there is no control from other members of the community prior to the consent. However, the reality was that the access to the counter-maps was limited. Even, in a group discussion in early June 2007, the local mapping team complained because they could no longer access the counter-maps that they produced. They felt disrespected.

5.9. Summary

The discussion on the conceptual understanding of counter-mapping depicts the situated meanings, an image one immediately has in mind as another person speaks, of selected keywords. The meanings show how the activists of counter-mapping movement in West Kalimantan posit themselves ideologically. The meanings in turn reveal the cultural models (Gee 1996) – ‘theories’ shared by a specific group – that the activists affiliated to Pancur Kasih built in the forms of a set of values, practices and attributes (or in short, the Discourse) of counter-mapping in their works. These cultural models show their roots in two different grounds: one in the modern cartographic mode, while the other on indigenous Dayak mode. However, there is a stronger grounding on the former, particularly on what constitute map and indigenous knowledge. Such position echoes throughout the methodology of counter-mapping of PPSDAK. Although it tries very hard to bring about Dayak concerns, it always resorts back to cartographic conventions and practices.

These cultural models are then translated into standardized methodology of counter-mapping which becomes the core of Discourse of counter-mapping. The Discourse blends indigenous Dayak decision making process, participatory research approach and conventional cartographic practices, which has a strong influence from Discourse of Pancur Kasih described in Chapter 4. From the above description one can understand how the Discourse is produced and reproduced throughout the mapmaking processes. It also shows a particular way of authoethnography, the use of the colonizer’s language by the colonized, which is a hybrid of cartography and Dayak knowledge and practices. It can be a good basis for a cross-border position for the counter-mapping activists. But with the stronger conviction on cartographic conventions and practices,
such position is difficult to practice, due to the ambiguous nature of the Discourse of counter-mapping.

The ambiguity is shown in the process of geographic translation within the counter-mapping exercises. As in other examples of geographic translation, the cartographic maps as the Target Text tend to reduce the complexities of the spatial literacies of Maap people as the Source Language. One fundamental issue here is that the spatial knowledge of Maap people is based on movement, whereas the cartography, or mapmaking in Ingold’s (2000) argument, insists on fixation of movements through its persistence to produce accurate points, lines and polygons. Such insistence has affected how Maap people perceive boundary and, thus, social relations within and between kampung. The people also do not use the maps in everyday life.
CHAPTER 6
CONCLUSION

6.1. Introduction

This dissertation uses the ideas exemplified in critical cartography that suggest an assessment of the political, social and cultural ramifications of cartography, particularly the contestations of values, practices, and attributes in the subject. It continues a tradition in the history of cartography initiated by J. Brian Harley in late 20th century, which looks at the issue of power relations in cartographic enterprises. Also I have the interest on the interactions of spatial knowledges as promoted by Malcolm Lewis (1998) through the concept of cartographic encounters. Lewis explores the roles of Native Americans in cartographic encounters of the state sponsored mapping projects in colonial America. If most researchers on this topic follow Lewis in terms of the spatial and temporal scope of their studies, this dissertation ventures into the latest events of cartographic encounters in counter-mapping exercises—a form of counter-action with the main goal of asserting claims of local (including Indigenous) communities over lands and waters using the cartographic maps—in Indonesia. To do so I attempt to examine the relationship between the NGO activists and local communities and between members of the community in making the counter-maps using a case study in West Kalimantan, Indonesia.

I focus my study on the activists of a Dayak NGO, Pontianak-based PPSDAK Pancur Kasih, and Maap people, an Indigenous Dayak group in the central eastern part of the province. Through a combination of archival research and qualitative methods, I investigate the values, practices and attributes the NGO activists in counter-mapping movement that they have adopted collectively over time, or
‘trajectories’ in Gee’s term. I also attempt to understand how these trajectories affect the mapmaking practices. With the Maap people using participant observation and different interview techniques, I examined their spatial knowledge. Finally, I look at how actually the mapmaking process took place and how does it and the artefactual maps affect them.

In Chapter 1 I discussed an approach of critical cartography from the perspectives of postcolonial science and technology studies in looking at the interaction between technoscience (a term for combined Western science and technology) and Indigenous knowledge systems. Through this, I problematized the divide between them despite and argue that both borrow knowledge from each other throughout their development. I further discussed how the divide is the result of colonialism and its legacies and how the Indigenous peoples struggle to re-assert their knowledges as a means of self-determination. Counter-mapping has a cause toward the decolonization of Indigenous peoples by putting them back on the maps using the language of the state. With such nature, I argued, counter-mapping is both a social movement and a methodology. However, the use of such language (Western cartographic maps) becomes the very core of the counter-mapping dilemma. If the Indigenous peoples do not map their territories, someone will make the maps of those geographic areas; but by making the maps by and for them considerable disempowering impacts affect the peoples. In this dissertation I lay out how the dilemma comes to being.

I argued that counter-mapping is a form of cartographic encounters in Chapter 2 in which Western cartography interacts with other spatial knowledge system generally in an unequal position. I proposed to examine cartographic encounters through two components: spatial literacy and geographic translation. Spatial literacy is an ability to understand concept of space, apply processes of reasoning in determining spatial relationships, and to communicate those relationships. Borrowing the ideas from New Literacy Studies, I contended the multiplicity of spatial literacies in the forms of different concepts of space, tools of spatial representation, and processes of reasoning across cultures. In this regard, cartographic literacy – the ability of making, reading and using Western cartographic maps – is only one of the spatial literacies. Unfortunately, this rich diversity of knowledges is lost in geographic translations since the spatial knowledge of a
given group is transferred into cartographic maps that require conformity to rigorous cartographic conventions (Belyea 1992). Therefore, cartographic literacy in counter-mapping, as a consequence of the adoption of Western cartography, has significant dispossessing and disempowering effects, an issue I elaborate throughout the dissertation.

Nonetheless, the counter-mapping movement has flourished in many parts of the world. In Indonesia, the extensive growth was due to a confluence of a number of factors and discourses. First and for most, the movement grew as a response to the state hegemony over territorial claims (Peluso 1995), largely on indigenous territories, through spatial strategies of dispossession (Gregory 1994) that came with the Dutch colonial project and, later, through development projects of the independent Indonesian government. Local communities have been dispossessed and displaced from their lands through the imposition of the Western notion of property, transformation of place into space for capital accumulation, and the imposition of non-indigenous placenames. Among these, the creation of political forests, known in Indonesia as *kawasan hutan*, has the largest impact as these state forestlands overlap with indigenous lands. The statistics of the Ministry of Forestry itself mentions that nearly 32,000 desas are affected by the existence of the forestlands, either wholly or partly overlapped with forestlands (Kementerian Kehutanan 2010, 19). In West Kalimantan alone there are 1530 desas of this category covering almost half of the province and affecting nearly 70% of its population, 119 out of which are completely within *kawasan hutan* covering an area of 2.1 million hectares (Departemen Kehutanan & Badan Pusat Statistik 2007, 11-18).

Second, the counter-mapping movement had much influence from the epistemic communities—“a network of professionals with recognized expertise and competence in a particular domain and an authoritative claim to policy-relevant knowledge within that domain or issue-area” (Haas 1992, 3)—particularly those linked to the donor agencies. In this regards, the Ford Foundation and United States Agency for International Development (USAID) were key. Not only they provided crucial financial resources, but also brought in expertise from, among others, the United States, Canada, Germany and the Philippines. Resource persons from the last three countries, for example, participated
in the conference that led to the formation of Jaringan Kerja Pemetaan Partisipatif (JKPP) in 1996 with a funding from the Biodiversity Support Program, an initiative funded by USAID.

Meanwhile, the movement embraces the Discourses – an identity kit of a given group with its set of values, practices, attributes, and performance (Gee 1999) – of environmentalism, indigeneity, and agrarian reform. Environmentalism, especially its environmentalism-for-the-poor variety (Guha & Martinez Allier 1997), in Indonesia brought in the idea of participatory development and democratization since the mainstream development model was heavily technocratic, with its heavy reliance on Western educated development experts, and very authoritarian in nature. Key in these themes is that every citizen has the right to take part in the decision making of development projects and gain benefits from them. The Indigeneity came first as an alternative to the development model as indigenous communities were considered to be true guardians of nature and provided new ideas for resource management – an image that can easily slip into the notion of ‘ecologically noble savage’. Later, it turned into the Discourse of self-determination. Both Discourses blended into community-based natural resource management as a means to enable local communities to manage the resources on land and water under their effective control. Meanwhile the agrarian reform movement introduced an idea of having fair distribution of land for the people to redress land dispossession and displacement that the farmers (including indigenous peoples) had experienced. The movement thus grew out of the contestation over meanings and practices of natural resource management between local communities and ruling groups (as manifested within the nation-state) in producing spatial knowledge and, at the same time, in controlling and exploiting the territory of Indonesian state. By using the language of the state, the counter-mapping movement clearly promotes an act of autoethnography (Pratt 1992), the use of the language of the colonizer by the colonized to represent the latter’s concerns.

However, despite its resistance nature, the link of the movement with the epistemic communities and its heavy dependence on the financial resources provided by the donor community led it into a problematic situation. In many cases, the movement
had no choice but to conform to the language (discourse) of the donor agencies, which often represent the discourses of the mainstream groups. In many ways, the movement is also being disciplined within the global politics of development aids.

Therefore, the counter-mapping movement in Indonesia has a complex web of values, meanings and interests which have to be taken into account in analyzing it. With such a standing, I continue to discuss the Discourse of counter-mapping in West Kalimantan, which has a distinctive Discourse due to its nature as a part of identity politics.

6.2. A Discourse of Counter-mapping in West Kalimantan

The trajectories of the staff members of PPSDAK Pancur Kasih began with a primary Discourse of a rural Dayak.

The counter-mapping movement in West Kalimantan has pre-dominantly been led by Pancur Kasih, a Dayak organization. It has the only local organization that works solely on counter-mapping and thus been able to map the largest area under the scheme in the country. It has been the center of excellence for the movement in the country, where other organizations learn about the methodology of counter-mapping.

I just argued that the discourses of environmentalism, Indigenous rights, participatory development, democratization and agrarian movements shape a Discourse of counter-mapping movement in Indonesia. Similar process takes place in West Kalimantan with some additional key Discourses that leads to a distinct Discourse of counter-mapping, particularly that of Pancur Kasih.

As discussed in Chapter 4, the history of dispossession of Dayak peoples has a long history, even prior to the arrival of European, with the existence of all three types of Gregory’s (1994) strategies of dispossession: dispossessions through Othering, spatializing and naming. The development of large-scale economic enterprises to feed the resource needs of the global market, from timber to palm oil, has further dispossessed them to unprecedented scale. The current wave of the so-called land grabbing – appropriation of large land tracts for commercial resource extraction, including plantation, mining, and, quite recently, carbon trading which often works through the
decentralization scheme in permitting process – has intensified throughout the country and provides a challenge in terms of the scales of social movement. It is against these dispossessions that the Dayak resistance movement grew, particularly as Dayak peoples in West Kalimantan have gained more power in the local politics. Identity politics then becomes important in their lives.

Pancur Kasih, as an important organization in reviving Dayak identity after being dormant for decades (Davidson 2002; Tanasaldy 2012), has introduced a set of identities in its movement. Apart from the Discourse of environmentalism adopted nationwide, the indigeneity that Pancur Kasih introduced blends Dayak belief systems and Catholicism. In addition, it clearly opts to adopt modern science and technology in its works (Giring 2012), a position that is at odds since it considers formal education through which the knowledge system is introduced is “a part of the colonization process” (Widjaya 2012, 47). Such construction has led to the development of a Discourse of counter-mapping unique to Pancur Kasih.

The Discourse of counter-mapping within Pancur Kasih is based on a particular Dayakness which blends Dayak belief system, Catholicism and environmentalism. As the last two carry modernity into the circle of Dayak people, such Discourse can create confusion, if not conflict, within the communities it works with. It can be considered as a hybridity which merges the local philosophies and practices with mainstream modern values and practices, while the latter maintaining dominating position. The dominant position of the latter reveals in strong adherence to Catholic dogma and the emphasis on of Western knowledge systems in the organization despite inculturation practices and accommodation of the local knowledge. This identity construction has led to the development of a Discourse of counter-mapping unique to Pancur Kasih.

To the activists of Pancur Kasih counter-mapping became a necessity because it is crucial in reconstructing Dayakness and protecting the environment. Through counter-mapping the organization tries to defend land rights of Dayak peoples while, at same time, revitalizing/reconstructing Dayak values and governance system which had undergone oppression under the colonial and postcolonial government through the acts of mapmaking and community organizing. It uses kampung as a unit of mapping. In the past
Kampung with longhouse as the central of community life was an autonomous
socio-political unit headed by a chief who had executive and judicial powers in governing
all aspects of life. The land use maps have categories of land uses common among Dayak
groups, including fallow lands and forest gardens, which are absent in state-sanctioned
maps. The rapid expansion of large-scale extractive industries – including commercial
logging, timber plantations and oil palm plantations – has threatened both the lives of
Dayak peoples and the environment. As the lives of Dayak peoples center on forests,
Pancur Kasih seeks ways of protecting the forests. It is where environmentalism enters
into the Discourse of Pancur Kasih, which can be a problem for Indigenous peoples (cf.
Nadasdy 2005).

Pancur Kasih translated its ideological background into counter-mapping
methodology that intends to counter land claims of the dominant groups while
revitalizing/reconstructing Dayakness into the map artifacts and through community
organizing. The result is a Discourse of counter-mapping that blends means of reclaiming
or asserting their identities and control over resources. The identities appear in the
mapmaking process, particularly in placenames during boundary delineation, and the
categories within the maps, which show the swidden farming practices. In so doing, the
organization translates indigenous Dayak spatial knowledges into modern cartographic
language. It has produced an army of mapping facilitators and community mappers
recruited from its staff members and community members respectively to be agents of the
Discourse. These agents have largely contributed to the rapid expansion of
counter-mapping in the province, along with concerted efforts of the units of Pancur
Kasih. The Discourse that Pancur Kasih develops can be considered as a hybrid between
indigenous Dayak Discourses and Discourse of dominant modern society.

Such hybridity appears in the discussion on the conceptual understanding of
counter-mapping discussed in Chapter 5 through the search of situated meanings, an
image one immediately has in mind as another person speaks, of selected keywords and
the elaboration of methodology of counter-mapping within Pancur Kasih. The meanings
show how the activists of counter-mapping movement in West Kalimantan posit
themselves ideologically. The meanings in turn reveal the cultural models, ‘theories’
shared by a specific group, to build a set of values, practices and attributes – in short, the Discourse-- of counter-mapping that the activists affiliated to Pancur Kasih use in their works. These cultural models show their roots in two different grounds: one in the modern cartographic mode, while the other on indigenous Dayak mode. The Discourse inclines to cartographic literacy, while recognizing Indigenous spatial literacies as important component of the movement. Discussion of keywords shows such strong inclination, particularly on the meanings of map and Indigenous knowledge. For example, the discussion participants tend to understand map as the geometric representation of the world, as the mainstream society adopts. Therefore, there is a stronger grounding on the modern cartographic mode. Such position echoes throughout the methodology of counter-mapping of PPSDAK. Although it tries very hard to bring about Dayak concerns, it always resorts back to cartographic conventions and practices.

These cultural models are then translated into standardized methodology of counter-mapping which becomes the core of Discourse of counter-mapping. The Discourse blends indigenous Dayak decision making process, participatory research approach and conventional cartographic practices, which has a strong influence from Discourse of Pancur Kasih described in Chapter 4. From the above description one can understand how the Discourse is produced and reproduced throughout the mapmaking processes. It also shows a particular way of authoethnography, the use of the colonizer’s language by the colonized, which is a hybrid of cartography and Dayak knowledge and practices. It can be a good basis for a cross-border position for the counter-mapping activists. But with the stronger conviction on cartographic conventions and practices, such position is difficult to practice, due to the ambiguous nature of the Discourse of counter-mapping.

The ambiguity is shown in the process of geographic translation within the counter-mapping exercises. As in other examples of geographic translation, the cartographic maps as the Target Text tend to reduce the complexities of the spatial literacies of Maap people as the Source Language. One fundamental issue here is that the spatial knowledge of Maap people is based on movement, whereas the cartography, or mapmaking in Ingold’s (2000) argument, insists on fixation of movements through its
persistence to produce accurate points, lines and polygons. Such insistence has affected how Maap perceives boundary and, thus, social relations within and between kampung.

6.3. Cartographic Encounters in Counter-mapping

As I argue in Chapter 2, counter-mapping is a form of cartographic encounters, which in turn has two components: spatial literacy and geographic translation. Spatial literacy entails that a person has a concept of space, tools of representation, and process of reasoning. In this research I could not really get a good grasp of Maap spatial literacy, as I had very limited time to explore it due to the limited resources at hand. However, I sense the concept of space among them. Using Pandya’s (1990, 777) argument based on his study among the Ongee people in Andaman Islands that space can be defined “through the practice of movement,” I contend that the Maap has also a concept of space. I speculate that the concept can be a complex one.

If we see how the Maap land claims can be multiple on a single space, as in the case of one’s right over a tree on somebody else’s land, the space may be multiple and overlapping as well. It is fluid, not bounded. Their spatiality, how one relates to the world by making and using space, is based on movements, as shown in the swidden farming systems, frequent migration prior to sedentary lifestyles imposed to them, and hunting. Borrowing both ideas of behavioral geography and Pierre Bourdieu, Pandya (1990, 789) further argues, that this kind of abstract space construction “marries a ‘mental map’ of space to a ‘practical mastery of space.’”

For these reasons, I think Maap concept of space is probably close to what Robin Roth (2009) calls ‘dwelling space,’ to differentiate it from the abstract space as introduced by technoscience through cartography. An abstract space is “a static, bounded, homogenous space, existing apart from the observer and meant to be separated from the specificity of place” (Roth 2009, 209). She does not provide a clear definition of dwelling space, but it (Roth 2009, 211) implies a multiplicity of “simultaneously existing spatialities being produced through different sets of relations” which leads to a momentary expression of multiple social-ecological relations acting across scale. Boundaries are thus fluid and negotiated, neither static nor
absolute. It is a space produced through practices related to dwelling, to procuring a livelihood and through interaction with the environment and is continually shaped through social relations at multiple scales. Dwelling space is contingent on subjectivity, produced in relation (to social, political, economic processes) and through interaction (with the physical environment and with other people) and is thus material, dynamic and multiple.

The term is “a ‘more-than-abstract’ spatial imaginary” (Roth 2009, 208) and connotes “dynamism, multiplicity and ambiguity” (Roth 2009, 217). From a political ecology point of view, the term reveals “networks of use patterns embedded within overlapping territories between villages and households” (Roth 2009, 220). Furthermore, it shows “a spatiality that is multiple (in that different social groups may have different use patterns), dynamic (in that tenure institutions and land use patterns are contingent upon social relations) and material (in that the physical environment shapes the present and possible patterns of dwelling in a place)” (Roth 2009, 221). With this limited explanation, it is necessary to study further Maap spatial literacy.

Now I move to geographic translation, a process of translating Indigenous spatial knowledge into cartographic maps (Belyea 1992). From the beginning, proponents of counter-mapping in Indonesia have acknowledged the practice of translation of mental maps into modern maps in the mapping process. PPSDAK adopted this idea as well, and consciously transforms Indigenous spatial knowledge into cartographic conventions placed on modern maps. This is a necessary move to gain state recognition for Indigenous land claims. However, there are a number of unintended effects, particularly those related to the shift to modern conceptions of space and property. Although counter-mapping, in Indonesia at least, was an outgrowth of participatory methods, where the peoples are expected to be the mapmakers and the map users at the same time, local communities could not assert their Indigenous spatial knowledge as mapping facilitators have dominated the mapmaking processes. Therefore, unequal power relations in counter-map production, both between mapping facilitators and the community and within communities, have predominated. The proponents of counter-mapping have to
deal both with social and cultural reality, as well as with the constraints of cartographic techniques.

In the case of PPSDAK geographic translation is particularly interesting. The mapping facilitators are clearly what Bedeker & Feinauer (2006) calls as cultural mediators in the translation process, as they are Indigenous persons who have adopted cartographic techniques to make counter-maps. To do that, they argue, “the translator needs cultural knowledge and awareness in order to apply successful translation strategies during the production of a cross-cultural communicative instrument that functions optimally in the target culture” (Bedeker & Feinauer 2006, 139). The translation strategies include how the source text is interpreted in relation to its situation in the target culture, how the function of the target text is interpreted in the target culture, and to what extent the target text is compatible in such function (Bedeker & Feinauer 2006, 135). Furthermore, Venuti (2000a, 477) argues that “[a] translation is a linguistic ‘zone of contact’ between the foreign and translating cultures, but also within the latter.” The mapping facilitators have the cultural knowledge and awareness of the source culture (Dayak cultures in general of which Maap culture is one) in this regard, and they work within a contact zone of Indigenous spatial knowledge and cartographic knowledge. But the cartographic conventions and practices are unable to translate the proper meanings of the spatial knowledge of the source culture into the target culture. The translation of Maap’s spatial literacy into cartographic maps shows this problem.

In translation theory the issue of equivalence is central, particularly in 1960s and 1970s after Roman Jakobson published an article on the linguistic approach to translation. He argues that “[e]quivalence in difference is the cardinal problem of language and the pivotal concern of linguistics” because “[n]o linguistic specimen may be interpreted by the science of language without a translation of its signs into other signs of the same system or into signs of another system” (Jakobson 1959/2000, 114). He emphasizes that “[l]anguages differ essentially in what they must convey and not in what they may convey” (Jakobson 2000, 116). Here equivalence is, therefore, ‘understood as ‘accuracy,’ ‘adequacy,’ ‘correctness,’ ‘correspondence,’ ‘fidelity,’ or ‘identity’; it is a variable notion of how the translation is connected to the foreign text” (Venuti 2000b, 5).
With such understanding, Kenny (1998, 77) defines equivalence as “the relationship between a source text (ST) and a target text (TT) that allows TT to be considered as the translation of the ST in the first place.”

Geographic translation works along the same principle. Cartographers strive to make mathematical equivalence of the world on maps using the concept of map scale. Belyea (2007, 53) writes

> Since the fifteenth century, European maps have been based on a principle of spatial equivalence: the surface of the map represents, according to mathematical ratio, the surface of the earth. The map’s graduated frame limits and defines this space; each point on the map can be related to a geographic location by a system of coordinates. Thus the entire surface of the European map is significant: even blank spaces have geographical meaning.

In the case of mapping indigenous landscape, the landscape is the source text and the Western cartographic map is the target text. The insistence on spatial equivalence has been translated into the insistence on points, lines and polygons. On the contrary to the Western maps, the indigenous maps, based on her readings on the maps made by Native Americans during the contacts with the European explorers, Belyea (2007, 53, emphasis in original) argues that

> the surface on which the Native map is drawn is insignificant. The shape of the map – its meaning as a coherent image – is determined by a clearly connected network of cartographic signs. There is no spatial correlation between the map design and the ground on which it is drawn. Hence there can be no question of scale, a concept that is fundamental to European scientific cartography.

If we can generalize this finding, Indigenous communities are more concerned with the features within the landscape rather than their positions on the earth’s surface.
6.4. A Case of Maap Performance Cartography

“An essential point is that if space is performative, it has a history, and if knowledge is performative it is spatial.”

(Turnbull 2002, 137).

As described earlier, Maap landscape contains traces of their history, sources of livelihoods and markers of their movements in it. Landscape making, therefore, becomes the basis for their identity and, at the same time, their territorial claim. Their landscape is full of markers of their movement in the forms of forest gardens, swiddens, and temporary huts for hunting as the results of their migration and subsistence. Tema’akng (forest garden) is marker of their migration over generations. The different stages of vegetational succession mark the cyclical use of land for farming. Temporary huts and markers on the trees record their daily movements within the forests. Such movements are common among Dayak peoples. Therefore, like the cartography of kinesics of the Ongee people in Andaman Islands (Pandya, 1990), Maap people map their area through their movements.

To Ingold (2000; particularly Chapter 13), the movement is a means of gaining knowledge and also to map the landscape. Ingold (2000, 229; emphasis in original) argues that “knowing … proceeds along paths of observation. One can no more know in places than travel in them. Rather, knowledge is regional: it is to be cultivated by moving along paths that lead around, towards or away from places, from or to places elsewhere. … [Therefore,] we know as we go, from place to place.” In short, we gain knowledge as we move within the world, because “people’s knowledge of the environment undergoes continuous formation in the very course of their moving about in it. [The process of fine-tuning along the path of movement] consists in the engagement of the mobile actor-perceiver with his or her environment” (Ingold 2000, 230). Turnbull (2007, 142) uses the term hodology to describe this that implies path or trail as a means to “neatly [link] space, knowledge and cognition.” Here he considers knowledge production as a performance as it is based on movement within space. To quote him (Turnbull 2007, 142):
From a performative perspective, the making of knowledge is simultaneously the making of space, and space is made by travelling. … Knowing is a form of travelling, of moving through space; and travelling, like knowledge, is also a form of narrative.

Through what he calls “complex-process metaphor,” Ingold (2000, 220) argues that wayfinding is not “a simple process, of bodily locomotion, to a complex structure, the mental map,” but “a skilled performance in which the traveller, whose powers of perception and action have been fine-tuned through previous experience, ‘feels his way’ towards his goal, continually adjusting his movements in response to an ongoing perceptual monitoring of his surroundings.” Ingold (2000, 232) also argues that “all wayfinding is …mapping.” This act of ‘getting around’ is about remembering or retelling the journey made by himself/herself or his/her ancestors. His argument is that the travel requires someone to remember the move from one place to another. In addition, wayfinding is essentially temporal because “the path, like the musical melody, unfolds over time rather than across space” (Ingold 2000, 238). In moving along the path, a traveller apprehends and remembers the movement “through time rather than across space” (Ingold 2000, 240).

Ingold’s theory applies to Maap spatial knowledge. They know their landscapes as they move within it, from their settlement out to their pemogi pejalatn (tanah usaha), including swiddens, and to forests around the kampung through experience, memory and repetition. They usually start with a knowledgeable person, primarily parents and other older people, to get the experience with the new places. They keep the memory of the places and revisit the places over and over again, either with someone who knows the places or by alone himself/herself. Through this process, they remember the placenames along the path. The Maap map their landscape through their wayfinding within it. In this cartography of kinesics, Pandya (1990) argues, “[m]ovement generates and defines space and space-time, both of which affect [Indigenous] modes of thought and codes of conduct” (p.777) and it produces a ‘map’ which is “an iconic representation of movements that create places, space, and the social order” (p. 782). This can be considered as “kinesthetic social act” that falls into the category of performance
cartography (Woodward & Lewis 1998, 4). The recognition on such category and other categories of Indigenous cartographies breaks the limit of conventional cartographic emphasis on visual representation. But the point I would like to make here is that those formats enable the Indigenous peoples to represent their fluid territoriality as well as the rich and complex relationships among human beings and between human and nature. Nonetheless, it is important for Indigenous peoples to communicate the limits of their territories to their neighboring groups. Unfortunately, counter-mapping tends to subdue such diverse cartographies due to its heavy reliance on scientific cartography.

6.5. Ironic Effects of Counter-mapping

When we use a technology in a very large scale and very intensive, we do not have any choice but to seek technological solutions of the same nature or related ones if problems arise. In this case we cannot quit from the technology. In other words, we do not have the luxury of using our exit rights from the technology. This is what is called the ironic effects of technology (Fox et al. 2005, 3). The outcomes include changing human relations among each other and their relations with nature.

It is also the case with mapping. Every corner of the earth will be mapped one way or another using any spatial information technology (SIT), including remote sensing or, now, Google mapping project. Indigenous lands are no exception. However, as Fox et al. (2005, 4) argue, “[i]ncreased dependence on SIT will transform the relationships between human actors and their spatial environments in ways that correlate with loss of the indigenous spatial practices that were originally to be conserved through their deployment.” The process takes place by “trans[form]ing the discourse about land and resources, the meaning of geographic knowledge, the work practices of mapping and legal professionals, and, ultimately, the very meaning of space itself.” (Fox et al. 2005, 3). What are the ironic effects of counter-mapping among the Maap people?

First, counter-mapping and the use of SIT have affected property relations and concept of space, particularly on the issue of boundary. The Maap people identify their boundaries between kampung with placenames, including tayak (fallow land), tema’akng (forest garden), and pagontikng (narrow valley between two hills). These are areas, or
polygons as it is known among GIS community. With the current practice of delineation, boundaries have to be lines, not polygons. The area-shaped geographic features are then simplified to mere lines to conform cartographic insistence on accuracy in order to calculate the land area. Therefore, insistence on lines to represent boundaries is inherent within cartographic practices. It has a lot to do with the development of capitalism that is based on clearly defined private property, which cadastral mapping as an important component of cartography intends to depict since its beginning (Pickles 2004, particularly in Chapter 5). In his discussion on boundary delineation, Turnbull (2005, 757) suggests the boundary is actually “a story about the ways in which people live with a multiplicity of spatialities and the essential tensions between movement and fixity, between simplicity and complexity, between order and disorder, between similarity and difference, and between inside and outside.” The current cartographic practice tends to simplify these features.

Furthermore, the existing complex tenurial relations and geographical features are largely reduced, and even eliminated, from the counter-maps. Such representation disrupts social relations between neighboring *kampung* as the boundaries tend to be fixed while erasing the fluidity and complexity of property relations existed previously. Consequently, individualization of resources, a concept counter-mapping tries to address at the beginning of its history, has begun to appear among Dayak communities. Thus the shift has begun to strike the very core of Dayak collectivism, which counter-mapping also tries to maintain.

Another fixation comes from the counter-maps, particularly the land use map, that tend to freeze the movements of land uses by taking a snapshot of the land use at the time of mapmaking. Meanwhile, the Maap people map their landscape through their movements. One of the causes may be the incompatibility of modern cartography to translate. It is what Turnbull (2007, 140) calls the ‘mapping problem,’ where there is “the problem of incommensurability – of multiple, incompatible ontologies and perspectives.”

Second, the current practice of counter-mapping is not sensitive to power relations within the community which leads to the silencing of a number of groups within a given community. Those who do not attend formal schooling cannot fully participate in the
exercise, as cartographic literacy requires three Rs of general literacy (writing, reading and arithmetic). These include the elderly, who generally are the holders of spatial knowledge in the community, many women and the poor. Due to the patriarchal nature of the Maap people only men actively involved in the mapmaking exercises. Among the men the elite groups, both those with official government positions and the families of kampung leaders in the past, took the major part of mapmaking. Such practice raises questions as to how participatory such mapping is. Furthermore, the shift from manual mapping to computer-based mapping reduces further the level of participation within the communities.

A new form of silencing comes with the introduction of computer-based mapping. With the deployment of GIS the activist-cum-surveyors bring the data to their office in Pontianak for map production. Therefore, the only possible room for participation is on preparation and surveying stages. This situation is similar to the colonial mapping as the surveyors brought the geographic information to the centers of calculation distant from the location of the original owner. In short, communities cannot have meaningful participation and even loose their control over the production and use of the maps, although the ownership lies with them.

The discussion may further show the confusion within the movement. PPSDAK claims to be a part of Dayak movement that attempts to reclaim Dayak lands and to reconstruct Dayakness. However, the adoption of cartography tends to reinforce the dispossession, not dialogue as theory of counter-mapping I propose should entails. The constraint may be not in the technological choice, but more on the limitations of the existing cartographic techniques. The current counter-mapping practice, Sletto (2009, 147) argues, is “shaped by statist requirements for spatial fixity, precision, and cartographic ‘accuracy,’ while eliminating “the fluid, shifting, and socially contingent nature of lived, Indigenous spatial relationships. Ultimately, by abstracting and thus concealing the complex, lived spaces of Indigenous peoples, counter-mapping may increase, rather than weaken, state control of indigenous lands.” Such crisis occurs elsewhere in the world. Thus the Indigenous movement should seek new approach. As Pile (1997, 30) suggests, using the metaphor of map, “[m]aybe resistance is already a
place on the map, but … maybe it is about throwing away imposed maps, unfolding new spaces, making alternative places, creating new geographies of resistance.” Sletto (2009, 147) argues that there is a “need for a critical praxis of indigenous cartography that does justice to the specificities of indigenous place-making, while simultaneously harnessing the ‘power of maps’ in the service of indigenous justice.”

With such situation, counter-mapping movement stumbles into a serious problem. To quote Sletto (2009, 148) at length:

[the] perspective [of critical geography] on boundary-making informs an important critique of participatory mapping projects: that they are often premised on false dualisms – between nature and culture, between indigenous and non-indigenous, between scientific and local knowledge – and hence unwittingly produce fixed, impermeable boundaries in landscapes defined by movement, networks, and fluctuating social relationships. Rather than a neutral application of value-free technologies, map-making is entangled in the webs of power that shape indigenous landscapes, informed by contentious productions of indigenous identities, implicated in the socially contingent nature of knowledge systems, and shaped by the positionality of the (most typically western) scientists who direct indigenous mapping projects. Although these concerns are receiving increasing attention in the field of indigenous cartographies, participatory mapping is still most typically talked about as a technical problem, where the most prevalent question is how to most effectively and ‘accurately’ represent such essentialized, place-based identities in fixed, two-dimensional Cartesian space.

As it is the ironic effects of the application of SIT in counter-mapping, the solution is also technological. One way to do it is to ‘rewire’ a more inclusive GIS-2 (Sieber 2004, 25) that “must be able to represent different measures and visions and integrate local knowledge, support cultural and multi-lingual distinctions, and preserve – rather than reduce – frictions, disagreements, redundancy, and even error.” This new endeavor is the result of the critiques to GIS. Literature on critical GIS has suggested “a distinct and concerted movement toward recognizing and incorporating multiple epistemologies and ontologies within geographic information technologies” (Schuurman 2006, 736). Furthermore, GIS has to represent “social concerns including power relations, gender
inequities, social control through numerical representation, and social marginalization” (Schuurman 2006, 736). This new development may need to embrace the concept of border crossing as a means to enable the GIS researchers and users working on the realms of Western science and technology and Indigenous knowledges simultaneously.

6.6. A Philosophy of Counter-Mapping

As I discussed in Chapter 4, dispossession has taken place through the impositions of Western rationality, state territoriality, and place naming, which Gregory (1994) calls spatial strategies of dispossession. Through these processes, the nation-states, both colonial and post-colonial, create imaginative geography of their territories (Said 1978), separating lands of culture of “the modern European imaginary and the advance of European culture” (Gregory 2001, 87) from the wild nature – “an external and eternal domain lying outside the historical trajectories of ‘culture’ (Gregory 2001, 88; emphasis in original). At the same time, it becomes resource base using ‘nature as an accumulation strategy’ (Katz 1998) to feed and nurse the human population. In this way, nature is dominated, domesticated, and feminized by the culture and is separated from it at the same time (Gregory 2001). In effect, the result is “the prospect of dominating nature through the production of a different, differentiable space, of bringing this unruly nature within the disciplined, regulated, and ordered perimeter of culture” (Gregory 2001, 91; emphasis in original). In other words, the space – “a neutral, pre-given medium” that is “absolute and infinite as well as empty and a priori in status” (Casey 1996, 14) – is produced through “enclosures and partitions that demarcate the colonizing from the colonized” (Gregory 2001, 87). Such a separation between culture and nature in modern thought, with its concerns much on space (Casey 1997), enables the manipulation of nature. Mapmaking, a crucial component in this process, enframes the nature – which means “both to set the world up as a picture and to treat the world as a picture” (Gregory 2001, 92) – in order to represent the reality of nature into “a unified and fully legible space” (Gregory 2001, 92). With that, “place was disempowered; all the power now resided in space” (Casey 1996, 20).
In its core, counter-mapping is to fight against the ‘erasure’ of local communities (including Indigenous peoples) from their places as the nation-states are interested to create space out of those places. It is a fight against what James Scott calls the *last enclosure movement* of the nation-states, both colonial ones and their postcolonial predecessors, which attempts “to bring nonstate spaces and people to heel” (Scott 2009, 4). Borrowing the term from Johnson and Murton, it is a means of ‘re-placing’ the peoples in terms of both putting them back on the maps and enable them to reclaim and re-make their places. It can be what Cobarrubias and Pickles (2009, 42) call, using the thoughts of Foucault and Deleuze, a *new cartography* which “is used by the social movements … to refigure the relations of power that structure socio-spatial life and to remap the social spaces of everyday life in ways that produce new political subjects.” It is “productive, aimed at mobilizing alternative geographical imaginations, expanded spatial practices, and new worlds” (Cobarrubias & Pickles 2009, 43). Furthermore, the movement can lead to *spatial justice*, a concept introduced by Edward Soja, which tries to “bring out more clearly the potentially powerful yet often obscured spatiality of all aspects of social life and to open up in this spatialized sociality (and historicality) more effective ways to change the world for the better through spatially conscious practices and politics” (Soja 2000, 352). In short, he attempts to “[represent] and [encourage] a strategic and theoretical emphasis on the specifically (and often neglected) spatial aspects of justice and injustice” (Soja 2009, 32).

As I argued, counter-mapping is a form of cartographic encounter, as it works with cartography and indigenous spatial knowledge, and at the same time a way of democratizing cartography with its emphasis on advocating lay persons as mapmakers. Cartographic encounters imply an unequal power relations between surveyors/cartographers and local communities, because the former imposes their own agenda and knowledge over the latter. Local communities cannot control the mapmaking process, map contents, and the use of maps covering their areas. Conventional mapping thus disempower local communities. It is in this very context that counter-mapping tries to empower the communities by treating them as knowing subjects, a central component of Paulo Freire’s thought. In so doing, the proponents of counter-mapping integrate
cartographic literacy with indigenous spatial literacies. However, so far there is no clear philosophy of this place-based movement.

Cartographic encounters in both colonial state mapping and counter-mapping activities show a similar pattern of unequal power relations in producing the representation of Indigenous places. The superiority of Europeans over others in colonial setting and the insistence of using the language of the colonizer in counter-mapping silenced the subjective values, meanings and experience of Indigenous peoples in representing their places. These factors can lead the Indigenous knowledge systems into further deterioration, which in turn can cause the loss of the peoples themselves. Because knowledge system, as Barth (2002) argues, is almost equal to culture, the loss of knowledge systems means the loss of cultures. This also means that the future of humanity can be more or less homogenous with slight modifications locally. Now, how can we prevent this to happen?

One way is that, since each knowledge system is intrinsically local, we should emphasis the locality of knowledge systems. To emphasize such spatialization of knowledge, Turnbull (2000, 19) introduces ‘knowledge space’ as he believes that

[a characteristic] that all knowledge systems has is their localness. It is both situated and situating. It has place and creates a space. An assemblage is made up of linked sites, people and activities; in a very important profound sense, the creation of an assemblage is the creation of a knowledge space.

In other words, knowledge system emerges from place, so it should be embedded in place. However, as the place is dynamic due to changes in culture, knowledge space also changes, because it is “fluid constantly forming and reforming, colliding and coalescing, solidifying and blending as different places and actors move or are linked” (Turnbull 1999: 10). He further argues that “[such spaces] are polysemous and are capable of many possible modes of assemblage and of providing alternative interpretations and meanings. Hence all knowledge spaces are potential sites of resistance” (2000: 19). However, these changes should be without violence, such as coercion, especially in the interaction
between knowledge systems. Instead it should occur in dialogical processes, which is my second point.

Turnbull (1999: 10) suggests that we should not try to push “one unified mode of representation” of knowledge, but instead we have to maintain “the lived messy multiplicities of our life worlds to proliferate.” It can be done through a dialogical process among cultures especially between Western culture and non-Western cultures, in which the issue of translation is central. In this regard Belyea (1998: 150) suggests that:

Instead of continuing to translate the native cartographic convention into [scientific cartographic one], we need to acknowledge that the gap between these conventions is essentially unbridgeable. The best we can do is to initiate a dialogue with native cultures as they have survived, keeping in mind the dangers of upstreaming. … [B]y considering such very different maps and cultures, we could learn more about our own.

Bassnett (2002, 6) proposes approaching translation using postcolonial theory which tries to promote a “linguistic exchange [that is] essentially dialogic, as the process that happens in a space that belongs to neither source nor target absolutely.” She (Bassnett 2002, 6) further argues that a translator should be

a liberator, someone who frees the text from the fixed signs of its original shape making it no longer subordinate to the source text but visibly endeavouring to bridge the space between source author and text and the eventual target language readership. This revised perspective emphasizes the creativity of translation, seeing in it a more harmonious relationship than the one in previous models that described the translator in violent images of ‘appropriation’, ‘penetration’ or ‘possession’.

With such a void of philosophical foundation, I propose to combine the ideas of cartographic literacy and Freirean critical literacy into a concept of critical cartographic literacy. This is done by treating maps as texts and by treating mapmaking by local communities as a means of liberation and emancipation. Such literacy is about developing a Discourse of cartography which enables local communities (particularly indigenous communities) to fight against dispossession. By being cartographically literate the dispossessed as learners gain ‘consciousness’ about the oppression that maps impose on them and then produce new meanings through counter-mapping. The act of
counter-mapping is an action to transform the existing power relations on controlling space.

To carry out a counter-mapping exercise the local community should understand first the contents of existing maps of their place produced by modern cartography, as well as how such maps affect them. This leads to or enhances the consciousness of how injustice is expressed in space. The production of maps of their own is the action they take to confront the injustices.

The counter-mapping movement provides opportunities for people to fight back and regain spatial control. The dispossessed take action by using the ‘language’ of the dominant as a ‘weapon’ to resist the imposed control through the production of maps to rewrite their place. To be able to use the ‘map’ communities have to embrace cartographic literacy and are required to translate their knowledge of their territories into maps that meet cartographic standards. By being cartographic literate the dispossessed can obtain social, political and economic understandings about the injustices displayed on a map and then produce new information through counter-mapping. This social movement, therefore, strives towards social and environmental justice through resistance against the hegemonic actors and a process of social transformation (empowerment) within the communities.

Counter-mapping thus becomes an aspect of critical cartographic literacy. This idea is the same line of thinking with the idea of Amoo-Adare (2004, 1) on critical spatial literacy, which is “the ability to read codes embedded in the urban built environment in order to understand how they affect social life and to determine if there is a need for spatio-political action.” In this regard, local communities are expected to learn ‘reading’ the codes embedded in modern maps and to understand how maps impose spatial control over them and their places. They then take action by turning the ‘language’ of the dominant as a ‘weapon’ to resist the imposed control through the production of maps of their version in order to rewrite their places.

In making maps, dialogues and border crossing should take place in order to produce maps that represent the interests and Discourses of the dispossessed. In the literature on counter-mapping, dialogues seem to occur between the locals and the
mappers as they learn from each other in producing maps. In Freirean critical literacy the locals can be considered as learners, whereas the mappers – who are the activists from non-governmental organizations, researchers, and indigenous persons with mapping skills – are educators. In his seminal book, Freire (1993, 88-89) writes that dialogue is “an existential necessity” in which the encounter, which is “the united reflection and action of the dialoguers are addressed to the world which is to be transformed and humanized”. It must takes place with love, humility, “an intense faith in humankind,” and mutual trust to build up hopes and induce critical thinking among those who are involved in the dialogue (Freire 1993, 89 -92). In the end through dialogue the participants will empower each other and take action to transform the world. Therefore, dialogue tries to reveal unequal power relations embedded in the text and to take actions to pursue a more democratic society. Such society is only possible if the individuals who are engaged in these encounters allow themselves to break away from the comfort zones of their respective cultures to embrace the diverse cultures around them. It is where border crossing matters.

Border is a crucial concept in postcolonial studies because it “concerns with the constructed boundaries between peoples, nations and individuals” as a means “to problematise and so dismantle the binary systems which bring them into being” (Aschroft et al. 2007, 25). Border is “both enabling and exclusionary” (Giroux 2005, 6). As for border crossing, Giroux (2005, 2) argues that it is to “engage the complex and dynamic force of the borderlands that people inhabit and cross through a range of pedagogical strategies and ideologies in which the naming, marking, crossing of various cultural and geographical borders are addressed within the specificity of different contexts, strategies, and pedagogical practices” (Giroux 2005, 6). He continues, “[t]he borders of our diverse identities, subjectivities, experiences, and communities connect us to each other more than they separate us, especially as such borders are continually changing and mutating within the fast forward dynamics of globalization” (Giroux 2005, 7). We should see these connections as “a force of tension, domination, and emancipatory possibilities” (Giroux 2005, 7).

Giroux (2005) identifies three issues on the border crossing. First, it recognizes “epistemological, political, cultural and social margins that structure the language of
history, power, and difference” (Giroux 2005, 20). Second, it presents “the need to create pedagogical conditions in which students become border crossers in order to understand otherness in its own terms, and to further create borderlands in which diverse cultural resources allow for the fashioning of new identities within existing configurations of power” (Giroux 2005, 20). Third, “border pedagogy makes visible the historically and socially constructed strengths and limitations of those places and borders we inherit and that frame our discourses and social relations” (Giroux 2005, 20).

Border crossing in counter-mapping involves the ability and willingness of the mappers to understand other kinds of spatial literacy. To date counter-maps mostly follow cartographic standards, which I believe are incompatible with the uniqueness, richness and complexities of indigenous spatial literacy. Cartography developed within the philosophy of modernity, and it is based on a secular, reductionist view of the world. Indigenous philosophies contain spiritual, holistic views. The challenge for the proponents of counter-mapping is how to find a middle ground.

Adopting Henry Lefebvre’s and Homi Bhabha’s ideas, Turnbull (2000: 228) advocates that we should develop the space of dialogue, a third space. This interstitial space is

a space that is created through negotiation between spaces, where contrasting rationalities can work together but without a notion of a single transcendent rationality. In such a space the questions of trust and especially distrust needs to be negotiated … A third space is then a space in which the hidden power assumptions about the kinds of selves, objects and their relations that is presumed in the moral order, have to be allowed to become visible. This, I suggest, is not feasible at the purely representational level. For differing knowledge traditions to coexist in a common third space they need to simultaneously agree to build such a space and to perform together.

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By creating a third space western knowledge system and Indigenous knowledge system can have equal power relations, since it puts dialogue before anything else in their encounters. According to English (2005, 87):

"Third" refers to the constructing and reconstructing of identity, to the fluidity of space. In cultural studies literature, third is used to denote the place where negotiation takes place, where identity is constructed and reconstructed, where life in all its ambiguity is played out. Third space serves as a rebuttal or corrective to regulating, rigid views and suggests that identity is a complex, ambivalent, negotiable, and somewhat contested space where polarities do not apply.

Meanwhile to Khan (2000), this third space is a "politicized, creative, in-between, fluid space" (p. 126).

Looking back the origin of cartography from cosmography, it is not impossible to work on such third space. Scientific cartography is able to embrace other traditions of spatial representation with their inclusion of subjective phenomena of human experience on earth as a partner of dialogue. As Pearce & Louis (2008, 109-110) argues, it can be done through an “informed use” of geospatial techniques and technologies by emphasizing on cartographic language through a focus “on the structures of the map and the mapping process and finding ways to shape those structures in order to convey the structures of Indigenous cartographies.” According to Mato (2011, 419), it is a difficult task of “translating worldviews, sensibilities, and meaning, which are issues of ‘intercultural communication’ that we need to tackle with great care in each case and context.” We have to keep in mind, however, that knowledge traditions affect each other, particularly in this globalized world, as the history of science has shown.
Nonetheless, learning from postcolonial cultural geography, it is an important call for to promote the plurality of “spaces of knowledge” by centering epistemological diversity in the discourse. Although Howitt and Suchet-Pearson (2003) argue that it is not enough because postcolonial cultural geography still operates within a hall of mirrors of Eurocentric geographical knowledge. It does not go outside the realm of geography to seek explanations from other knowledge traditions. To get out from this problem, they propose that we have to embrace ontological pluralism in our Discourses. One way to do this is, according to them, through ‘situated engagement,’ “an approach which encourages noisy and unruly engagement in situated, interacting material, discursive and conceptual places” (Howitt and Suchet-Pearson 2003, 566). In this approach one should reach in, reach out and reach across to understand other knowledge traditions.


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