



## When seed fails: The contested nature of neoliberalism in South Korea

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### ABSTRACT

In recent years, many geographers have examined the ways that the production of nature has changed as a result of neoliberal practices. In this paper we examine a conflict in South Korea that started when some Chinese-cabbage seeds were affected by a virus, causing crop failure. This failure came shortly after liberalization in the Korean seed industry led to foreign ownership of the firm that sold the seed. We focus in particular on the farmers' creative political responses – and their subsequent defeat in court. Drawing on Antonio Gramsci's insights on politics, science, and law, we examine how the seed failure came to be evaluated through scientific and legal practices. We argue that the adjudication of the truth of the seed failure through science and law reveals how socionatures are contested under prevailing hegemonic conditions. These conditions are both general and specific: although law and science are relatively hegemonic spheres of truth-production in all capitalist societies, the ways that the seeds were disputed and evaluated were distinctly Korean.

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### 1. Introduction

In the fall of 2001, a group of farmers from Goje-myon, in South Korea's Gyeongnam province, found disconcerting changes in their farm fields. The Chinese cabbage they had planted that year – the main ingredient for the popular Korean side-dish *kim chee* and also the basis for their livelihood – began to develop ugly, black spots on the leaves. Soon thereafter, the inner part of the plant began to curl (see Fig. 1). Sixty-one households saw their crop damaged across some 65 ha, comprising one-third of the total area of Chinese cabbage cultivation in Goje-myon (Seoul Central District Court, 2004; Munhwa Broadcasting Corporation at Jinju, 2001). Similar damage to Chinese cabbage was also found in other parts of Gyeongnam, Gyeongbuk, and Jeonbuk provinces (see Fig. 2; Korean Broadcasting System at Changwon, 2001; The Korean Farmers and Fishermen's Newspaper, 2001; Segye Times, 2001). The farmers saw these changes, certain to reduce both the yield and value of their crop, as symptoms of a viral disease. The total cost of damage by the virus was estimated at 40 billion Korean won, or ~US\$ 34 million (Munhwa Broadcasting Corporation at Jinju, 2001; Segye Times, 2001). These losses generated a political dispute that lasted for several years.

The subsequent dispute centered on the seeds planted by the farmers that year, a type called "Booram 3 Ho". Booram 3 Ho was

initially bred and marketed by a Korean seed company Hungnong Seed Co., Ltd. in the early 1990s. But in the wake of South Korea's 1997–1998 financial crisis, the world's largest transnational vegetable-seed corporation, Seminis, then based in the USA, acquired Hungnong.<sup>2</sup> SeminisKorea subsequently sold all the seeds developed by Hungnong – including those for the cabbage that sprouted, grew, and shriveled in the fields of Goje-myon in 2001. The farmers responded by building a movement that organized demonstrations and a boycott. SeminisKorea retaliated by filing a lawsuit against the farmers for damages.

That these seeds were no longer sold by a Korean company complicated the subsequent chain of events because the farmers connected the failure of their cabbage with the foreign ownership of the seed company. The sale of Booram 3 Ho seeds by Seminis is an important fact for our analysis, too, since it means that this case provides another example of one of the astonishingly wide range of ways in which neoliberal capitalism has changed the ways different social groups contest changes in their local environments.

The specific link between Booram 3 Ho and neoliberal capitalism was forged through the increasingly monopolistic global market for seeds. The growing hegemony of a handful of global firms is changing the shape of the seed industry (Kim S.-J., 2006; Rosset, 2006). For instance, the 10 largest seed companies controlled half of the \$21,000 million global commercial seed market in 2005 (ETC Group, 2005). These giant firms are the result of several recent waves of mergers and acquisitions in the seed

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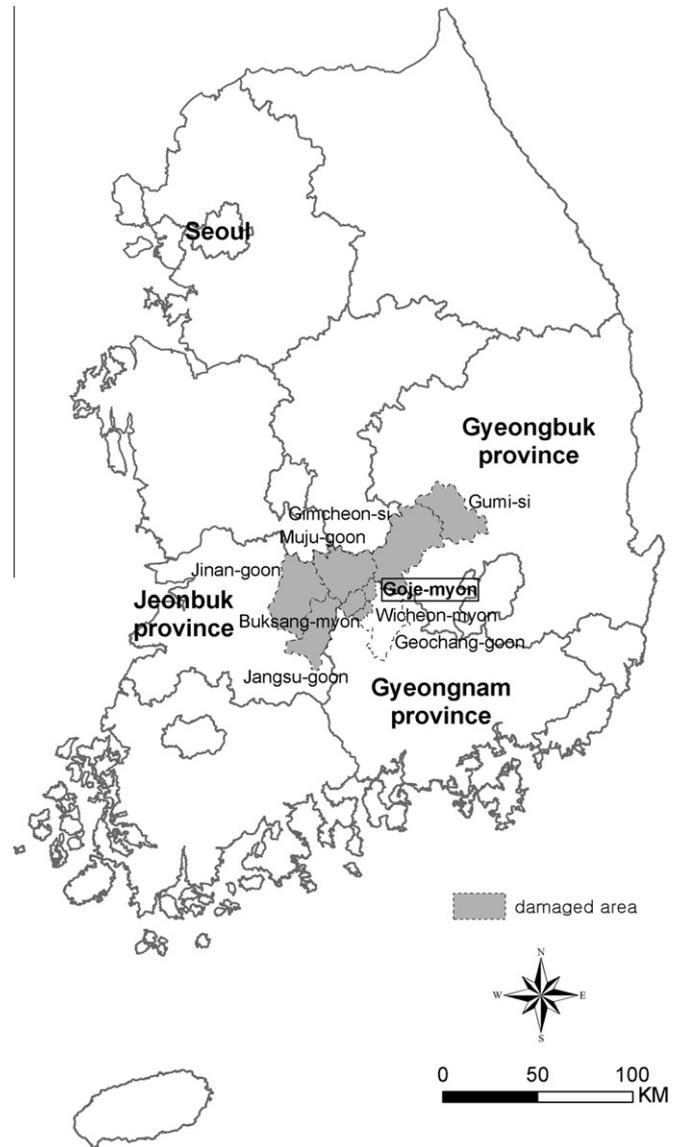
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<sup>2</sup> Fox Pain and Company bought 67% of SeminisKorea in 2002, and Monsanto took over the whole company in 2005 (Seminis, 2005).



**Fig. 1.** Virus-infected Chinese cabbage grown from Boolam 3 Ho seeds. Accessed from the Goje farmers' website: <http://www.gojenong.co.kr/photo/index.asp?ck=4&id=photo>.



**Fig. 2.** Location of damaged crops in South Korea.

industry that have been prompted by two intersecting processes. First, advancing biotechnological processes (such as genetic modification) have facilitated the creation of a monopolistic global market for seeds. Second, global implementation of an increasingly strict patent system has tightened international norms and laws to support the privatization of plant genetic materials. Taken together, these processes have intensified competition by large firms to capture market share (Kloppenborg, 1988; Goodman, 2001; McAfee, 2003). As neoliberal practices have shifted state policies against protection of local markets for domestic firms, many local and regional seed companies have come to compete with larger, more global firms, particularly those based in the USA and Europe. For instance, in Korea during the 1990s, the conditions for foreign investment in domestic firms were steadily liberalized. The 1997–1998 financial crisis brought a wave of mergers in the Korean seed industry. Transnational corporations acquired four major domestic seed companies that together accounted for 64% of the domestic vegetable-seed market (Kim S.-J., 2006). Seminis was established in 1994 to consolidate leading seed companies into a global research, production, and marketing platform (Seminis, 2005). From its headquarters in California, it acquired Hungnong – the company that produced Boolam 3 Ho – between 1997 and 1999. Through its global production networks, Seminis produces Boolam 3 Ho – although originally bred in Korea – in different parts of the world (i.e. China) as long as their climates, soils and other ecological conditions are appropriate for seed-raising, gather them into an operating facility for processing (i.e. coating), and then distribute

their final product to the world. The production of seeds by global firms like Seminis in Korea represents one outcome of a global capitalist project that has caused not the commoditization of nature (since farmers were already buying seeds) but has rather changed the political and geographical dimensions of commoditization. Set against the long history of agriculture, farmers have only recently begun to adapt to a world in which seeds are not grown and exchanged locally but are produced for sale by agribusinesses with a global reach. Around the world, farmers are increasingly dependent upon transnational corporations to purchase seed. We should then ask: what then happens when their seed fails? Who is liable when farmers buy seed that fails? What causes some seed to fail, and how do we know it? How are the new geographies of the global seed industry reshaping the ways that farmers respond when their seed fails?

In this paper, we examine these questions by analyzing this case of seed failure and its aftermath. Our aim is to examine how the struggle around these seeds came to be articulated by the Goje farmers, Seminis, scientists, and the courts. We argue that the adjudication of the seed failure through science and law reveals

how particular truths about socionatures are produced and contested.<sup>3</sup> Such contests over truths, we contend, play out under hegemonic conditions (in Gramsci's sense). These conditions are both general and specific: although law and science are hegemonic spheres of truth-production in capitalist societies, the ways the seeds were disputed and evaluated were distinctly Korean, particularly in the farmer's resistance. By reading these engagements and strategies, we may come to appreciate how they reflect the conditions that define hegemony in Korea today. Our interpretation of the Boolam 3 Ho story therefore clarifies the nature of hegemony in Korea. More generally, we aim to contribute to the rich literature in geography on neoliberalism and nature by shedding new light on the relations between science, law, and resistance.<sup>4</sup> Thus, this case illuminates how nature–society relations are being reshaped in ways that are at once common and yet also influenced by particular hegemonic conditions.

## 2. Literature review

### 2.1. Socionatures, capitalism, and hegemony: a Gramscian view

We may locate this study within the broad part of the recent geographical literature that interprets environmental politics by drawing from the Marxist and post-structuralist traditions. These traditions share three key points of agreement that we take as axiomatic: the need to transcend the binary distinction between nature and society, the need to examine the social relations that shape environmental conflicts, and the need to study the production of nature as a contingent effect of historical and geographical conditions.

In the early 1930s Antonio Gramsci followed Marx by criticizing the dualism of the nature–society distinction and by insisting upon a critical, Marxist analysis of the transformation of nature–society relations under capitalism. This is not the place for a thorough discussion of Gramsci's approach to nature.<sup>5</sup> Here we limit ourselves to briefly restating Gramsci's principal argument: we should conceptualize nature–society as *active, practical relations* that are effects of historical–geographical conditions. In this purview, the challenge is to examine environmental politics by historicizing nature–society relations while also criticizing the conceptualizations thereof. In the prison notebooks, he writes:

Man does not enter into relations with the natural world just by being himself part of the natural world, but actively, by means of work and technique. Further: these relations are not mechanical. They are active and conscious. They correspond to the greater or lesser degree of understanding that each man has of them. So one could say that each one of us changes himself, modifies himself to the extent that he changes and modifies the complex relations of which he is the hub. In this sense the real philosopher is ... the politician, the active man who modifies the environment, understanding by environment the ensemble of these relations which each of us enters to take part in (Gramsci 10II§54; 1971: 352).

These arguments should seem familiar to most political ecologists today. After all, Gramsci here merely restates – albeit in an especially powerful way – the essence of Karl Marx's approach to

nature and society.<sup>6</sup> Gramsci's analysis of nature and society was bound up with his general political project of understanding the conditions of hegemony, particularly in Italy in the early 20th century. Yet as Gramsci underscores, it is to Marx that we are indebted for the key breakthrough in the reconceptualization of nature in capitalist society. As Mann (2009, 336) explains, Gramsci's ethical materialism can and should provide the basis for political ecology, “since it is both a sharp critique and a powerful reworking of the methodological and epistemological basis of Marxism, i.e. historical materialism”.

Moreover, Gramsci's language may feel familiar to us because it resonates so strongly with recent post-structuralist writings that emphasizes the relationality and contingency of socionature. Arguably the key insight of the post-structuralist school in political ecology has been to insist on the fundamental necessity of questioning those practices that ‘naturalize’ things, that is, stabilize and sediment certain things *as natural*. We suggest that Boolam 3 Ho is another example of an object that complicates the stability of the categories ‘social’ and ‘natural’. Perhaps all seeds are such quasi-objects, since they are at once an original and enduring form of sustenance for humans and, for many thinkers, the very essence of ‘nature’. Seeds are seen as earthy, organic, natural things. Yet in agricultural societies, seeds signify the social transformation of the world through *cultivation*. As the living embodiment of the agricultural transformation of nature and society, seeds symbolize a relation between ‘mere nature’ and ‘human produced nature’. Much as we may question the fundamental truthfulness of these categories, they reflect a historical meaning that is difficult, perhaps impossible, to deny. For instance, the distinctive, local landrace varieties of seed that are cherished around the world are rightly considered *cultural* resources of distinct peasant societies. This suggests that we recognize that seeds are *produced* in particular places, through the long processes of domesticating wild plants, caring for seed, improving, and so forth. The development of seed hybridization broke barriers to seed commoditization; new genetic techniques only further this long-standing trend (Buttel, 1989, 1990). These changes have been achieved through the application of scientific labor to produce new commodities for private appropriation of plant genetic resources (Kloppenborg, 1988; McAfee, 2003). Today, advocates of genetic modification argue for a new generation of technoscience to spur on new advances. Yet again, none of these changes will undo the perceived naturalness of the seed. This is because, even when seeds are produced by humans in ways that seem unnatural (e.g. genetic modification), the resulting seeds are not fundamentally controlled by humans. Seeds still grow and die, and are ever capricious. Seeds manifest the lively materiality of becoming.

We cannot know how seeds will be produced in the future, but two things are certain. Seeds will remain contested, and technoscience will play an ever larger role in the practice of producing seed. Thus, the long socionatural drama of human production and consumption of seeds will continue to become social, natural, and political in ever new ways. Within this Gramscian purview, here we examine the struggle around Boolam 3 Ho seeds in 2001–2003. Our starting point is that such struggles play out

<sup>3</sup> On ‘socionatures’, see Castree and Braun (2001) and Braun (2009).

<sup>4</sup> Several strategies were used to investigate this case: examining the diary of the farmer's Countermeasure Committee; media analysis; study of legal documents. One author (Kim) also conducted interviews with a farmer (also manager of Countermeasure Committee), the lawyer who assisted the farmers for the lawsuit, and one of the vice-presidents of SeminisKorea who was involved in this seed dispute. A follow-up study was conducted by meeting the lawyer in 2005 on the 2004 and 2005 court decision.

<sup>5</sup> See Fontana (1996) and the papers in *Geoforum* 40 (3).

<sup>6</sup> In Marx's conception of nature and society, as Karatani (2008) explains, “history is to be viewed from the vantage point of the relations between humans and nature as well as the relations between humans. ... [R]elations between humans and nature are inseparable from the relations between humans. When humans relate to nature, it is by way of their mutual relation” (p. 571). Karatani further argues that “Marx regarded the relation between humans and nature as *Stoffwechsel* (‘metabolism’) – that is, material exchange” (2008, p. 571). This defines, in Karatani's words, “the Marxian natural historical viewpoint,” shared by Gramsci. Karatani (2003) emphasizes that the key point of Marx's reference to *Stoffwechsel* between nature and society is *exchange*, not *matter*. We agree. Gramsci's analysis of matter and materialism (Q11§30, 1971, pp. 465–468) are sympathetic with Karatani on this point.

within a particular hegemonic terrain, one defined by uneven power relations that are the result of earlier struggles. As Mann (2009) eloquently notes, such an approach must do more than simply “point out that the ruling bloc is hegemonic [...]”; it must also explain *how and why that hegemony operates in the social life of thought* – norms, morality, common sense” (our italics). A thorough analysis of how hegemony operates in Korean social life obviously exceeds the space of one paper. Here, our aim is specifically to examine how the farmer’s resistance to the failure of their seeds took shape and became ‘normed’ by science and the law (which we take to be an effect of hegemony). In so doing, we show that scientific knowledges may conflict through law in ways that reflect the interests of the leading social groups.

## 2.2. Contesting neoliberalism and agrarian change in Korea

Neoliberalism has become a key conceptual term for describing privatization, commoditization, and the increasingly ‘free’ movement of finance and commodities across the boundaries of nation–states. It is often presented as a top–down project, spreading from a few core countries all over the world. Yet geographers have long emphasized that neoliberalism is not a monolithic, external force operating upon the world in a unitary fashion. Rather, neoliberalism has been unfolding in distinct forms with important variations (Jessop, 2002; Larner, 2003; Peck and Tickell, 2002; Peck, 2004; Larner and Craig, 2005). By examining the resulting spatiality of neoliberalism, geographers emphasize the struggles around neoliberal projects and the conflicts and spaces through which neoliberal projects actually materialize (Larner, 2000, 2003; Leitner et al., 2007; Brenner and Theodore, 2002). These arguments have been played out in some detail in the burgeoning literature on political ecology and neoliberalism (Mansfield, 2004; McCarthy and Prudham, 2004; Robertson, 2004; Heynen et al., 2007). While our study has benefited from this literature, our central interest here is to examine how a conflict over a particular social nature is shaped by historical–geographical legacies and political conditions of Korea.

To better understand the farmer’s resistance to the failure of their seeds, we need to turn our attention to agrarian change in Korea. Though declining in number and in relative contribution to Korea’s GDP, Korea’s farmers remain a powerful political force. Their strength is rooted in Korea’s political and economic transformation in the 20th century. For example in his study of agrarian change and conflict in Korea, Shin (1998) argues that land reform was not simply due to the beneficence of the American military government or the Rhee government (the first president of Korea after the Japanese colonial period). Rather, it was *compelled* in part by peasant demands that were expressed through revolts and rebellions. Shin’s research also shows that non-economic factors – especially agrarian conflict and subsequent land reforms – directed the decisive shift in landlords’ capital into industrial centers. This capital movement has had conflicting impacts on agrarian classes, paving the way for further conflicts that continue to the present (Shin, 1998; Hahm, 2005).<sup>7</sup> Nevertheless, this capital movement along with the ‘developmental state’ approach characterized by strong interventionism and nationalism in formulating industrial policies, led the Korean state to its industrial success. In addition, the state has been deeply involved in agricultural policies. It has controlled agricultural prices through a parastatal organization that distributes producer subsidies (McMichael and Kim, 1994; Kim C.-K., 2006; Abelmann, 1996).

Rural dissent has grown steadily since the 1970s. In the mid 1970s farmer activism was largely dependent on the Catholic

Farmers Union, established in 1972 (Abelmann, 1996). The 1980s saw qualitative changes in the movement organizations, with efforts to simultaneously localize the movement while building toward national unification. Nationally-integrated, county-level farmer organizations emerged organically. These locally rooted organizations became the cells of a national oppositional body independent of the church. By the end of the decade, calls for the unification of the farmers’ national agenda came to be organized around the state’s lack of commitment to rural development and state repression by the militant Chun regime. That agenda broadened further with the formation of the National League of Farmers Association (also known as the ‘Korean Peasants League’ or KPL) in 1990, which signaled the emergence of a more disciplined and united farmers’ movement.

Although the Korean state decreased emphasis on rural development and producers subsidies, it still protected domestic farmers by restricting agricultural imports, especially rice (McMichael and Kim, 1994; Kim C.-K., 2006; Abelmann, 1996). Yet since the 1980s and particularly after 1997, neoliberalism has utterly reshaped Korean society (on neoliberalism in Korea, see especially Armstrong (2008), Hart-Landsberg and Burkett (2001), Jessop and Sum (2006), Kong (2004) and Pirie (2008)). Given that Korea experienced rapid industrial growth fostered by its authoritarian bureaucratic industrializing regimes and US policies for East Asia in the past, liberalization in industrial sectors has been legitimized with the prospect of obtaining Korean manufacturing export access to foreign markets, especially in the US (markets which have contracted since 2007). Korean agricultural policy has tended to be highly protective, and the resistance of farmers to opening agricultural markets remains strong.<sup>8</sup> This recent tradition of protest contributed to the resistance practices which the Goje farmers enacted in their dispute with Seminis.

## 3. Evaluating Boolam 3 Ho scientifically

### 3.1. Counterarguments and conflicts

The positions of the two sides may be briefly summarized as follows. SeminisKorea blamed the crop loss on extreme weather in the area, including high temperatures and drought during 2001. The damage had not occurred because of defective seed. To make their point, SeminisKorea presented the average temperatures and precipitation for July, August and September from 2000 to 2002 as scientific data (Fig. 3). The problem was bad weather, not bad seed. Therefore, the company was not liable.

For their part, the Goje farmers accused SeminisKorea of providing them with inferior seed. The Goje farmers contested SeminisKorea’s argument regarding high temperatures with two main arguments, each grounded in their appreciation of the variability of local environments. First, they argued that the high temperatures should have affected the Chinese cabbage in its early stage of growth (i.e. at the seedling stage) but not later. Since the Boolam 3 Ho cabbages revealed the virus-disease symptoms – the curling of the inner leaves – only after reaching the mature growth stage, the Goje farmers argued that high temperatures were not a significant factor in the seed failure.

<sup>8</sup> The emergence of KPL was sparked by the Uruguay Round negotiations that went onto create the WTO, as well as pressure from the US state to open Korea’s rice market (cf. Abelmann, 1996). In 1993, farmers mounted major protests against agricultural trade liberalization notable for their nationalist rhetoric and their anti-American tone: “a demonstration in Seoul gathered as many as 30,000 protesters; ... farmers refused to sell their rice to the government ... and blocked the agricultural cooperative offices with sacks of rice; ... they staged funerals – clad in mourning clothes made from rice sacks – to symbolize the death of Korean farmers” (Ibid.: 223). This moment arguably marked the arrival of Korea’s anti-neoliberalism movement.

<sup>7</sup> To this we must add the example of North Korean land reform (Cumings, 2005), which is de-emphasized in Shin’s account.

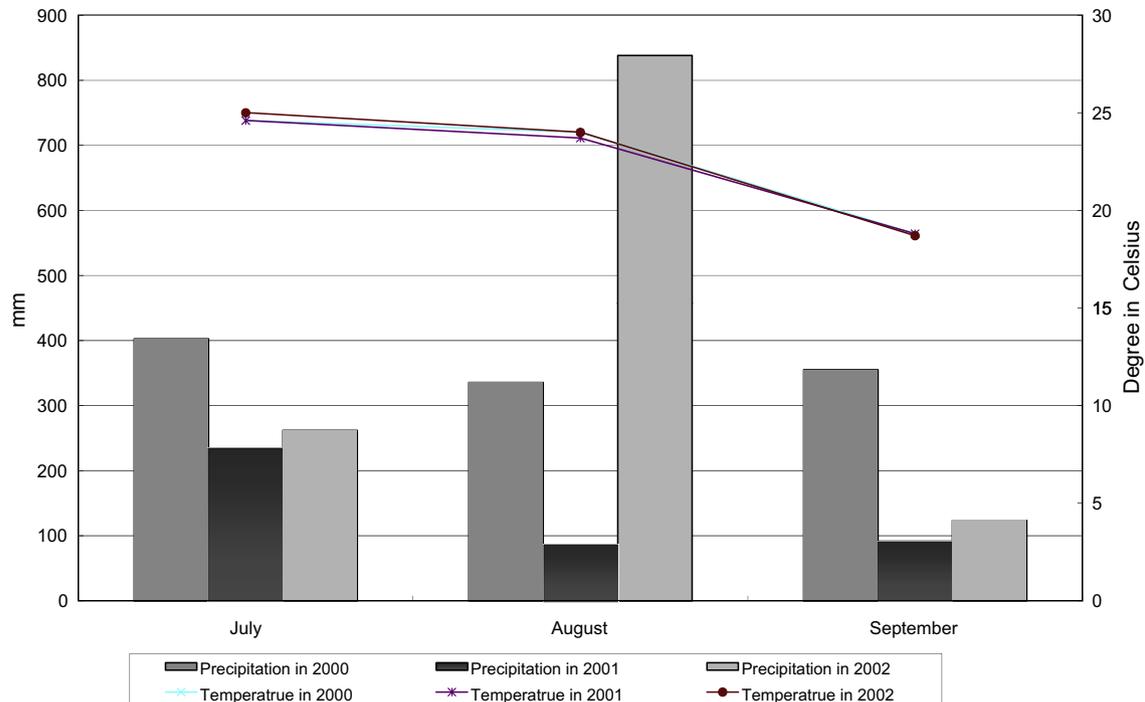


Fig. 3. Average precipitation and temperature of Goje-myon from 2000 to 2002. Source: Seoul Central District Court, 2004. NA 38121.

We have grown Chinese cabbage for 20 years and the Boolam 3 Ho, in particular, for 10 years. However, 'local' knowledge is understood as subjective and untrustworthy. Based on our long-time experience and knowledge, the damage was not a problem of hot and dry weather, but the defects of the seed (Choi, 2003, personal communication).

Second, the farmers argued that the geography of the outbreak did not support the bad-weather thesis. All the fields in which the Boolam 3 Ho seeds were sowed were damaged in the same way regardless of location, season, and sowing times. For example, fields in which other varieties of Chinese-cabbage seeds were sowed, although they were just a few meters distant, did not show the same virus-disease symptoms. The only commonality was the seeds (Lee, 2003, personal communication). In addition, one farmer, Kiyong Choi, provided testimony that, although he sowed both the Boolam 3 Ho seeds left over from 2000 and the Boolam 3 Ho seeds purchased in 2001 in the same field, he found that only 2001 seeds showed symptoms (Korean Broadcasting System at Changwon, 2001). Thus the Goje farmers concluded that the seeds themselves were defective.

By November 2001, the farmers had received no response to their appeals for compensation to SeminisKorea, so they made a public statement in protest and began to undertake direct action against SeminisKorea. Forty-five farmers traveled to SeminisKorea's headquarters in Seoul (about 340 km north of Goje-myon) on November 5 and held demonstrations including a sit-down strike for 5 days and 4 nights. Like most Korean farmers, most of those involved in this dispute were generally old and – by the standards of contemporary Korean society – relatively poor. Because the whole year's yield was ruined, they carried the burden of paying their loans for that year's farming from the National Agricultural Cooperative Federation<sup>9</sup>

<sup>9</sup> The National Agricultural Cooperative Federation was established in 1961 to enhance the social and economic status of member farmers and balance the development of the national economy. It has supported farmers, rural communities and agriculture by carrying out various businesses such as marketing and supply, banking and credit, and insurance businesses (NACF website, <<http://www.nonhyup.com/eng/about/message.jsp>>).

at Geochang-goon (Lee, 2003, personal communication). On November 7, 14 farmers occupied the office of SeminisKorea: they were shortly hauled to a police station and charged with damaging SeminisKorea's property (for details, see Fig. 4).<sup>10</sup> The duration of the struggle and the long-distance travel frustrated the farmers. One explained: "the winter of 2001 when we had the fourth successive day of protest in SeminisKorea's headquarters was so cold . . . We usually used winter for protests because we are free from farming. However, most farmers are very old, so we caught colds and were physically sick during the protest" (Lee, 2003, personal communication).

### 3.2. The growth experiment

The inability to resolve the dispute over the Boolam 3 Ho and the farmers' continuous demonstrations led the two parties to undertake an experiment to break the impasse. On January 24, 2002, they drew up a written agreement outlining a seed growth experiment that would examine whether the damage was caused by the defects of the seed or by extreme weather (Countermeasure Committee, 2003). The growth experiment relied on a method of simulation. They selected three places (approximately 0.6 ha) among the fields of Goje-myon in which the virus damage occurred in 2001 and sowed the Boolam 3 Ho seeds left over from 2001 in those three places in August 2002. The agreement on the growth experiment specified three conditions (1) no political demonstrations, nor civil or criminal actions, would be allowed until the completion of the growth experiment and harvest; (2) if the crops grew well (as determined by a third party), SeminisKorea would be free of responsibility for the 2001 seed failure, and the Goje farmers must issue a public apology in agricultural newspapers; (3) if the virus damage were to occur over more than 30% of the field and the sale of the Chinese cabbage by field<sup>11</sup> were not possible, Semini-

<sup>10</sup> This was the Goje farmers' first protest in SeminisKorea's headquarters in Seoul; three more took place between November 2001 and January 2002 (shortly before they reached an agreement for the growth experiment).

<sup>11</sup> It is common practice among farmers to sell agricultural products by field; for example, a broker may buy all the Chinese cabbage a farmer produces in one field.

<b>2001</b>	
Sept 19	Goje farmers find Chinese cabbage infected by virus
Oct 4-5	Documentation of damage (12 towns, 61 households, 65.5 ha) by farmers and township officers; farmers ask for 600 million Korean won compensation
Oct 8	Countermeasure Committee established by Goje farmers
Oct 16	First major protest and public statement
Nov 5-8	First direct action protest against SeminisKorea: a sit-down strike in front of the SeminisKorea's headquarters in Seoul involving 45 participants and lasting 4 nights and 5 days
Nov 7	Farmers occupy SeminisKorea offices; police arrests
Dec 2	Second direct action protest against SeminisKorea: 120 participants
<b>2002</b>	
Jan 22	Third direct action protest against SeminisKorea: 25 participants, 2 nights and 3 days
Jan 24	SeminisKorea and Goje farmers drew up a written agreement for growth experiment
Aug 27	Three (~0.6 ha) sites selected among Goje-myon fields and sowed the Boolam 3 Ho seeds for the growth experiment
Nov 15	Both parties examine the result of the growth experiment and draw up a written confirmation in the presence of twelve Goje farmers, two SeminisKorea staff members, an official of Goje-myon, a member of Geochang County Council, and a police detective
Nov 19	SeminisKorea proposes reinvestigation; Goje farmers reject it. SeminisKorea begins re-conducting the growth experiment alone
Dec 4	The Goje farmers reject SeminisKorea's suggestion on the compensation for the damage
Dec 12	The Goje farmers establish a "Joint Countermeasure Committee for Boolam 3 Ho Damage (JCCBD)"
Dec 27	The Goje farmers and Seminis Korea enter into negotiations but fail to come to an agreement. SeminisKorea sues the Goje farmers for 350 million won for the interference in the company's operations
Dec 28	The Goje farmers began to frame the seed dispute as a Korean farmers struggle against a foreign corporation
<b>2003</b>	
Mar 13	The Goje farmers sue SeminisKorea for producing inferior seeds, demanding 1.45 billion won for compensation
<b>2004</b>	
May 14	Seoul district court rejects the Goje farmers' complaint
<b>2005</b>	
July 14	Seoul high court rejects the Goje farmers' complaint
Dec 23	The Supreme court rejects the Goje farmers' complaint

**Fig. 4.** Key dates in the Boolam 3 Ho story.

sKorea would compensate the damage of 2001 by mutual consent (*Written Agreement on Growth Experiment, 2002*). This written agreement was stamped with the seals of the president of SeminisKorea, Oscar Velisco, and the manager of customer service as well as with thumbprints<sup>12</sup> of the chair and director of the Goje farmers' Countermeasure Committee.

In November 2002, both parties examined the result of the growth experiment and drew up a written confirmation in the presence of 12 Goje farmers, two SeminisKorea staff members, the head and one official of Goje-myon, a member of Geochang County Council, and lastly, a police detective (as a third party). The confirmation reads: "both parties confirm that virus damage due to a slight infection occurred in more than 30% of the field

and that slightly infected cabbage could be sold" (*Written Confirmation on the Growth Experiment Result, 2002*, our translation). The manager of customer service of SeminisKorea and the chair of the Goje farmers' Countermeasure Committee signed this confirmation but did not have a notary public to verify it. Although it was by mutual consent, this investigation was based on visual estimation for the degree of the damage without specific criteria on the number of black spots and other virus-disease related phenomena.

The conflict may have ended there, but it did not. The growth experiment exemplifies the limits of conceptualizing science as the objective pursuit of knowledge. We draw two key points from Gramsci's creative and critical approach to science (see Boothman, 1995; Wainwright and Mercer, 2009). First, for Gramsci science is *iterated* knowledge, produced through repetition and by the promise of repeatability. It is never finished but always in the process of refinement. Thus Gramsci claims that the first "aspect of scientific work" is that it "constantly corrects our way of knowing" (Gramsci,

<sup>12</sup> The use of thumbprints does not mean that the farmers are illiterate; thumbprints are commonly used in Korea as signs of personal endorsement (like signatures).

Q11§37; 1995 [1932], 291). Second, insofar as science is practical and social, it is always bound up with human history and subjectivity. Therefore, Gramsci does not regard science as a method for objectively studying the natural world. He valued scientific knowledge enormously but rejected its false pretences to objectivity. Taken together, Gramsci's approach to science allows us to recognize the distinctiveness of scientific practices without separating them from the other elements that constitute hegemony.

Consider the limitations of the growth experiment as a dispute-resolution process. First, it is impossible to exactly reproduce the agroecological conditions of 2001. There was no way to precisely replicate the temperature, precipitation, soil, wind, sunlight, farm practices, labor, and so forth. Even when all the conditions of the original experiment are in place, unpredictable outcomes may result. Second, the vague wording of the legal contract – which was supposed to compensate for the limitations of the scientific experiment – compounded these complexities and caused further disputes between the farmers and SeminisKorea by generating arbitrary interpretations by each side. SeminisKorea refused to compensate for the economic loss of 2001 because the written confirmation of the experimental results showed that sale of the Chinese cabbage was possible and actually occurred, even though the virus occurred in more than 30% of the field (*Seoul Central District Court, 2004*). The Goje farmers argued that the sale did not occur under normal conditions because they had to sell the Chinese cabbage at a much lower price than average because of the virus infection. According to the provisions of the agreement on the growth experiment, even in the case that the field was 100% infected, the Goje farmers could not be compensated if they were able to sell the Chinese cabbage at any price (e.g. even 0.1% of the regular price) (*Korean Farmers and Fishermen's Newspaper, 2003*). Farmers with no access to legal resources and knowledge failed to recognize the loophole the agreement provided for SeminisKorea, by making no provision for the economic loss in case of sale of damaged seed.

This loophole illustrates the ability of a well-resourced corporation to use legal means to defeat their poorly resourced opponent. While farmers had not been assisted by any lawyers by that time, SeminisKorea had 12 full-time lawyers. The occurrence of 30% damage as reported in the written confirmation of the growth experiment result was also contested by SeminisKorea. Although the first investigation of the growth experiment result was conducted by both parties, SeminisKorea suggested reinvestigating the results. The farmers' refused. SeminisKorea thus conducted a reexamination alone. SeminisKorea, with access to excellent scientific and legal resources, prepared their reinvestigation with more elaborate scientific practices. The company brought in three pathology scientists – “modest witnesses” in Haraway's (1997) terms – from its breeding research laboratory. In the second field trial they employed random sampling and videotaped the Boolam 3 Ho samples throughout the experiment. When their reinvestigation was complete, SeminisKorea concluded that the damage was less than 30% (*Seoul Central District Court, 2004*).

This seemingly scientific reinvestigation had weaknesses and shows how science works in practice. The reinvestigation was based on arbitrary criteria to determine the degree of infection. For example, Chinese cabbage with 10 black spots per leaf was categorized as slightly infected. But what about Chinese cabbage with only nine black spots? Who will draw the line? Given that the second investigation was based on arbitrary criteria, it was not so different from the first investigation which was based on visual estimation of the degree of damage, except for the presence of pathology researchers and the videotaping of the reexamination process. Furthermore, the two interested parties had not agreed on this criterion for the degree of the damage while the first investigation was based on mutual consent as to the degree of damage.

These results thus gave rise to a conflict of interpretations. Unequal resources underlay this new round of conflict. SeminisKorea was empowered by its command of labor – particularly legal and scientific labor. The farmers relied on their moral authority as hard-working Koreans and their political ability to organize.

### 3.3. From the laboratory to the court – by way of social movement

After a year of battling SeminisKorea alone but making little concrete progress, the Goje farmers began to construct more extensive networks with broader and more diverse social entities. They reframed the seed dispute as a conflict between *Korean* farmers and a *foreign* seed corporation. When negotiations over the growth experiment broke off, the Goje farmers established a “Joint Countermeasure Committee for Boolam 3 Ho Damage (JCCBD)” in December 2002 (*Countermeasure Committee, 2003*). The JCCBD consisted of some 16 different social organizations including farmers, agriculture-related organizations, various labor unions, and other civil society organizations (*Arim Newspaper, 2002; Countermeasure Committee, 2003*). In addition, the Goje farmers established an advisory board consisting of individuals and organizations representing a range of support bases, including, for politics, Kangdo Lee, a member of the National Assembly representing Geochang; for finance, the Presidents Association of the National Agricultural Cooperative Federation; for legal advice, three lawyers; for research, the director of the Korean Rural Society Institute; for solidarity, the Federation of National Farmers' Union; for public information, Farmers' Newspaper and other local newspapers; for translation and interpreters, Geochang English Institute (*Arim Newspaper, 2002; Munhwa Broadcasting Corporation at Jinju, 2002*).<sup>13</sup>

The construction of networks with these diverse social and political individuals and organizations would not have been possible without the Goje farmers' *national* framing of their campaign against SeminisKorea. The farmers struck a chord that is deeply rooted in Korean politics and the general public by reframing their ‘local’ seed dispute as an illustration of the broader *Korean* struggles against the overbearing business behaviors of a *foreign* transnational corporation. Reframing their campaign in these terms enabled the Goje farmers to enroll additional allies.<sup>14</sup>

The Goje farmers also examined SeminisKorea's business strategies to look for weaknesses. Because SeminisKorea produced its seeds in different parts of the world, the farmers reasoned, it must have mixed Boolam 3 Ho seeds from different places, without testing to remove virus-infected seeds. They concluded that the Boolam 3 Ho seeds must have been infected by a virus when it had been produced in China. By highlighting that SeminisKorea was a foreign transnational seed corporation which had merged with and acquired Korean seed companies, the Goje farmers appealed to public sympathy for vulnerable Korean farmers. Their appeals tapped into public hostility to foreign capital seen as threatening national sovereignty by monopolizing the domestic seed market.<sup>15</sup>

In constructing these networks, the Goje farmers engaged diverse actors at different scales. Through personal contacts and public ap-

<sup>13</sup> The farmers regarded the inclusion of a member of the National Assembly as important in gaining support from central government and the general public and in politicizing the seed dispute as a national issue and, thus, a diplomatic problem (*Lee, 2003*). The Presidents Association of the National Agricultural Cooperative Federation was chosen for financial support because it provided several services for farmers and rural communities such as marketing and supply, banking and credit, and insurance businesses. The lawyers were solicited for legal advice. Ties with newspapers were sought to help reframe the seed dispute as a national issue. The farmers also sought assistance in translating English texts because SeminisKorea was a foreign company.

<sup>14</sup> On the persistence and limits of nationalism in Korea's left social movements, see *Shin (2006), Wainwright and Kim (2008) and Glassman et al. (2008)*.

<sup>15</sup> The scalar politics by the Goje farmers is similar to that of Nongwoo Seed Company (*Kim S.-J., 2006*) because they attached to, and reconstructed the issues at, the national scale as a way of reformulating their power relations.

peals for assistance, the farmers found support from politicians and officials at various levels of government. For example, a member of the Geochang County Council, Yong-hwan Choi, made a speech asking for the county governor's assistance in solving the seed dispute at a regular council meeting in December 2002. He structured the issue as a diplomatic problem concerning national pride and interest as well as a regional problem that would cause frustrated farmers to give up farming and leave the area (*Geochang Newspaper*, 2002). The county governor of Geochang financially supported the establishment of a website for the seed dispute, which came online in January 2003. A member of the Gyeongnam Provincial Council (Shin-Jong Paek) also made a speech at a meeting of the Gyeongnam Provincial Council in March 2003. His speech represents a typical appeal to nationalist sentiment against foreign capital:

It was wrong to sell the seed industry to foreign capital even though we sold everything else. The seed industry is not an industry but life. The government that neglected agriculture, rural communities, and farmers deserves criticism, and must not leave the overbearing behavior of foreign transnational corporations as they are now. It is a point of national pride. I demand that the provincial governor command the vicious corporation to compensate for the damage and take strong measures against similar cases by investigating these transnational corporations (Shin-Jong Paek, cited in *Arim Newspaper* (2003), our translation).

The mass media actively reinforced this theme. In late 2002, i.e., before the creation of the Joint Countermeasure Committee, newspaper articles or TV news referred to the company neutrally, as “a seed company” or “Hungnong”, the name of the company which developed and produced the variety of Boolam 3 Ho before it was acquired by Seminis. Articles published since late 2002 have specified that the seed company in question is a “transnational” corporation, and the media have introduced SeminisKorea in detail, explaining its size, its headquarters, and position in the global seed industry (e.g. *Geochang Newspaper*, 2002; *Chosun Ilbo*, 2003; *Munhwa Broadcasting Corporation at Jinju*, 2002). Highlighting the “foreignness” of SeminisKorea increased the hostility of Korean farmers, politicians and the general public against foreign capital. Nationalist rhetoric has since been prevalent in regional and national mass media and reflects the change in the farmers' political strategies.

Reframing the seed dispute as a national issue enabled the Goje farmers to tap into old alliances between farmers' organizations. In January 2003, they succeeded in having their seed dispute adopted as a “fighting item” of the Gyeongsangnam-do Provincial Farmers' Union and the Federation of National Farmers' Union (also known as the Korean Peasants League) (*Countermeasure Committee*, 2003). Since the seed dispute was conceived as a matter of interest for all Korean farmers, it became a fighting item for organizations representing all Korean farmers. By mobilizing agriculture-related organizations such as branches of the National Agricultural Cooperative Federation at various levels (i.e., subcounty, county, and province), the Goje farmers began a boycott against SeminisKorea. They hung placards announcing the boycott and produced and distributed pamphlets informing the public of the high-handed behaviors of SeminisKorea with respect to the seed dispute (*Countermeasure Committee*, 2003). The boycott grew to gain wide political and economic support and eventually brought the conflict before the law by prompting a lawsuit by SeminisKorea.

#### 4. Seeds on trial: Boolam 3 Ho in the courtroom

In response to the boycott and to the Goje farmers' demonstration of November 2001 in which they had occupied SeminisKorea's office in Seoul, SeminisKorea sued the Goje farmers for 350 million won (equivalent to 292 thousand dollars) in January 2003 for interference

in the company's operations (*The Korean Farmers and Fishermen's Newspaper*, 2003; *Countermeasure Committee*, 2003). This was the first lawsuit against farmers that had ever been filed by a seed company in South Korea. The Goje farmers responded in March 2003 by accusing SeminisKorea of producing inferior seeds (*Chosun Ilbo*, 2003; *The Korean Farmers and Fishermen's Newspaper* 2003; *Countermeasure Committee*, 2003).

Before we examine the details of the legal conflict, a few words on Gramsci's approach to law and hegemony are in order. Gramsci saw the law as an especially important site for simultaneously repressive and productive work by hegemonic groups. This dual quality is captured by Gramsci in an eloquent passage where he defines law as “the repressive and negative aspect of the entire positive, civilising activity undertaken by the state” (Gramsci Q13§11; 1971: 246). In another note, Gramsci posits that it is through ‘law’ – a word Gramsci often square-quoted to underscore that law is no mere thing and that it should be conceptualized in an expansive sense – that the state “renders the ruling group ‘homogeneous’, and tends to create a social conformism which is useful to the ruling group's line of development” (Gramsci Q6§84; 1971: 195). Gramsci does not elaborate upon the character of this ‘homogeneity’ and this ‘line of development,’ but clearly he thought that the bourgeois conception and practice of law contributed to the hegemony of capitalist social relations by reorganizing ethical norms so that conflicting social groups (such as labor and capital) would willingly adopt patterns of conflict resolution that support the state and capital. For instance, he writes: “the revolution which the bourgeois class has brought into the conception of law, and hence into the function of the state, consists especially in the will to conform (hence ethnicity of the law and of the state)” (Q8§2; 1971: 260). In Gramsci's sense, then, the banal fact that this conflict over seeds became a legal dispute at all reflects bourgeois hegemony. In Korea, there is a popular saying about justice: ‘the law is far; the fist is near’. In other words, this saying affirms that justice may some times be achieved through direct physical action. We take this popular statement as a brute reflection of Gramsci's recognition of the unequal nature of legal processes. But more fundamentally, Gramsci's insight is to show that capitalist states tend to draw the law ever closer: in Korea today, the law is never so ‘far’. The density of the legal apparatus does not mean the end of injustice or violence, of course. It rather reflects what Gramsci paradoxically describes as the “negative aspect of the . . . positive” work of the state.

Gramsci's analysis helps to explain a certain paradox in Korea. The transition to the post-developmental (i.e. neoliberal) state – which started in the mid-1980s and was in our view completed by the post-1997 reforms – coincided with the end of military rule and the rise of democratic elections and rule of law (Cumings, 1998; Pirie, 2008). The paradox is that the ‘progressive’ moment of deepening democratic practices (including the rule of law) has coincided with the liberalization of capital and the roll-back of effective state economic planning.

The rule of law is a key part of this story, a double-edged sword that has cut away many arbitrary abuses by the authoritarian state, yet cleared a path for the power of capital and its teams of lawyers.<sup>16</sup>

<sup>16</sup> This is only one of the many paradoxes of the late 1990s, an era when Korean progressives finally won executive power only to confront a massive economic crisis. As Bruce Cumings writes: “Perhaps the supreme irony of the 1997–98 financial crisis was that the worst economic crisis in the country's history should come just as the Korean people were about to elect the dissident Kim Dae Jung . . . But it was not an accident, because Kim embodied the courageous and resilient resistance to decades of dictatorship that marked Korea as much as its high-growth economy did. Paradoxically, this maturing civil society became a key enabling mechanism for Washington and the IMF to get their way in Korea. Why? Because Kim's election brought to power people who had long criticized the state-bank-conglomerate tie-up and who, like the new president, had long been its victims” (2005, 396).

Gramsci analyzed these paradoxes at a high level of abstraction in his prison notebooks. As Cutler (2005) summarizes in her insightful analysis, Gramsci's conception of the law suggests that:

bourgeois law takes its form from capital, or more specifically, from the fetishised commodity form created by capitalist productive relations. This form is given life and consecrated by the state in constitutional, criminal and civil laws protecting individual, private property rights and securing the stability of possession. Insofar as laws such as constitutional and administrative laws then secure the authority of state, the influence of law and state is reciprocal. So too is the influence between law and capital reciprocal, for just as law is given its form by capital, capital is given its form by laws that enable its accumulation ... (2005: 529).

When political-economic struggles appeal to normal legal processes, *regardless of the formal outcome*, they participate in a reciprocal structure that extends beyond law to include capital and the state.

#### 4.1. The trial

The outcome of the trial went against the farmers (the plaintiff). Due to a lack of evidence the court did not admit the farmers' argument that the virus damage occurred only to the Boolam 3 Ho seeds:

We do not accept the plaintiff's argument that the viral damage happened to only Boolam 3 Ho seeds but not other varieties because the only evidence presented came from the plaintiff's side – a self-examination by a farmer, Jung-gi Baek ... On the contrary, based on the facts admitted by the court: (1) the virus was the same one, called turnip mosaic virus, which damaged the Chinese cabbage field in Muju-goon, Cheollabuk-do. Turnip mosaic virus is usually transmitted not through seed but by aphids; (2) turnip mosaic viral damaged Chinese cabbage in Hampyeong county (Cheollanam-do) in 1994, Hongcheon county (in Kwangwon-do) and Gapyeong county (Kyonggi-do) in 1996, and Yangpyeong county (Kyonggi-do) and Kanghwa county (Incheon Metropolitan City) in 1997; (3) precipitation in July or September 2001 was lower than other years. Thus we rule that the viral damage to the Boolam 3 Ho was not caused by a defect of the seeds but rather unsuitable cultivating conditions (Seoul Central District Court, 2004: 14–15, our translation).

Accepting statistical data on the temperature and precipitation of Goje-myon from 2000 to 2002 that indicated extreme weather, the court concluded that the damage should be viewed as the outcome of unsuitable cultivation environments at that time rather than a defect of the seed (Seoul Central District Court, 2004).

As for the growth experiment, the results of the first examination were not accepted as valid evidence notwithstanding the fact that SeminisKorea had agreed with the Goje farmers about the key result (>30% damage). Despite their mutual consent, the court reckoned the result of the growth experiment neither scientific nor cogent. Instead, the court accepted the results of the reinvestigation conducted by SeminisKorea alone. What made their evidence so persuasive?

The data prepared by SeminisKorea included the specific number of samples and damaged Chinese cabbage, and a videotape of the reinvestigation process (Seoul Central District Court, 2004; Nongmin Newspaper, 2004). Consider their use of video. SeminisKorea did not film the entire field site; like all representations, the video afforded only a partial view. Moreover, although the presence of 'experts' at the scene of the reinvestigation added weight to the evidence, these experts represented an interested party, SeminisKorea. Notwithstanding these limitations, the evidence from the second investigation counted as more reliable to the court judgment because it proved "objective"; it alone was pro-

duced through "scientific" methods (Seoul Central District Court, 2004). Unlike the camera, the farmers lacked standing as objective witnesses in the growth experiment.

While the court did not accept the agreement between the two parties on the occurrence of 30% damage in the growth experiment, it adopted the consensus that "the sale of Chinese cabbage was possible" from the same document. Emphasizing that some sales of Chinese cabbage occurred (albeit on a limited basis), the court concluded that the damage amounted to less than 30% of the total crop:

Although the written confirmation of the growth experiment result seems to confirm the occurrence of 30% damage, it lacks evidence. On the contrary, the reexamination conducted by SeminisKorea alone shows that the damaged Chinese cabbages were 47 among 1201 samples. In addition, considering that the sale of Chinese cabbage occurred, we judge that damaged Chinese cabbage was less than 30% (Seoul Central District Court, 2004: 18).

Yet, in its decision, the court did not address the question of the price received by the farmers. Since the farmers did not sell healthy-looking Chinese cabbage, they explained that the price they received was well below market rate. Nevertheless, the court found that SeminisKorea had no responsibility for compensation.

One interpretation of this outcome – shared by many of the farmers – is that the court sided with scientific knowledge over and against the farmers' knowledge and experience. This interpretation still presumes that the scientific knowledge of SeminisKorea was more scientific (here meaning objective and accurate) than the farmers. The appeal to video and number proved to be more amenable to the court than the farmers' testimony. Such an outcome is not really surprising. It is a result of "the complex way that some knowledges are celebrated while others are denigrated" (Robbins, 2006: 186).

In sum, the Goje farmers gained broad social and political support through nationalist rhetoric, yet found themselves in a weak position in the courtroom. Although the Goje farmers appealed against the decision of the central district court in late May 2004, the Supreme Court in December 2005 refused to overturn the original decision (Supreme Court, 2005). The farmers conceded victory to SeminisKorea. Most returned to growing Chinese cabbage – but many stopped purchasing their seeds from SeminisKorea. They substituted Boolam 3 Ho seeds with different varieties of Chinese cabbage seed (named "Fall Yellow" and "Whistle") as a weak form of resistance. Yet, Korean farmers literally have no choice but to purchase seeds from transnational seed companies (though not SeminisKorea) since transnational seed companies dominate the Korean vegetable-seed market (Lee, 2003).

## 5. Conclusions

Korean farmers and workers have led transnational struggles against the World Trade Organization in the last few years. There have also been struggles against unfair international trade systems which inflict pain on both human beings and nature in many cities of the world. These world-wide well-known struggles reflect that changes in soil and harvest of agricultural product are related to national policies and market surrounded by world trade system. Korean citizens, farmers, consumers, workers, scientists, teachers, professors and legislators are all living in political ecology.

Paul Robbins, 2008<sup>17</sup>

<sup>17</sup> Our translation. This statement comes from Robbins' preface in the Korean version of his book.

In Korea as in most parts of the world, a combination of political, economic, technoscientific, and legal processes has facilitated the commoditization of seed varieties (whether landrace, hybrid, or genetically engineered). These changes have also created new potential conflicts over seeds. The Goje farmers' struggle for compensation after their crop failure illustrate how strategies to contesting neoliberal policies are articulated and influenced by the specific political, economic and social contexts of South Korea. Our ultimate aim was not to evaluate the efficacy of the Goje farmers' resistance *per se* but to consider what the farmers' resistance reveals about hegemony in Korea and the way it may be reworked and resisted (see *Leitner et al., 2007*). The Goje farmers' adoption of various political, legal, scientific, and media strategies further exemplifies that the grand tradition of Korean agrarian resistance is alive and well. At the same time, the uneven effects of their strategies underscore the continuing importance of nationalism in shaping hegemony outside the legal arena today. By playing on nationalist sentiments, the Goje farmers reframed the local seed dispute as a conflict between hard-working Korean people and a greedy, foreign, transnational, seed corporation. This in turn enabled the farmers to construct networks with broader and more diverse social and political actors who operated across different scales. As a result, the Goje farmers changed their situation by organizing a boycott. Yet, ultimately, their struggle died in the courtroom.

The argument about the causes of crop damage by the farmers demonstrates that appeals to law and science to solve environmental disputes are far from straightforward. As the post-structural critique of nature has clarified, the conventional understandings of 'science' and 'law' must be called into question as bases for truth. In this case study, interactions and relations of the produced seed among its own components (e.g., genes, cells, and organelles) and with the outside environment were unpredictable and contingent, making it more difficult for 'science' to play the role of arbiter of truth. Part of the resistance of the Goje farmers was to put into play the very question of science; the question of what counts as 'scientific' or 'objective'. Indeed, what does or does not qualify as properly 'scientific' was at the center of the dispute and the final court decision. Ultimately, the farmers failed in this court. But this only clarifies the limits of their resistance to hegemony and underscores the ongoing need to produce creative strategies of resistance. As Gramsci argues, law is an important site for simultaneously repressive and productive work by hegemonic groups. In this case, the uneven command of scientific and legal resources dominated the struggle over the truth of these seeds, and as a consequence the conflict between these social groups was resolved in a way that conformed prevailing norms.

What remains, then, is struggle over socationature. In Robbins' words, Korean farms are indeed "living in political ecology". As are we all.

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