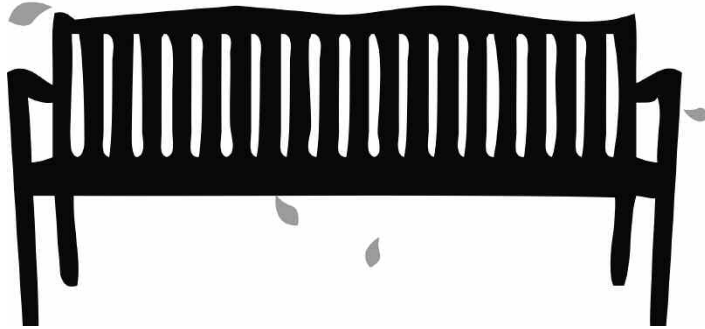


*Hemp and Industry in Italy:
Between Pasts and Present*



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Hemp and Industry in Italy: Between Pasts and Present

Highlights:

1. As a textile fibre, hemp maintains a complex and contradictory relation with industrialisation in Italy.
2. Used as material for navigation, rural cloth, or finer textile, hemp's history spans different worlds.
3. In Italy today, there is a relatively wide interest in the productive recovery of hemp
4. In the Susa Valley, hemp allows for a bottom-up reimagination of the local economy
5. Hemp's history reveals the evolving relation between agriculture and industry, technology, and economic pasts.

Abstract: This text proposes a diachronic analysis of the relation between hemp and industry in Italy. It first retraces the history of hemp in modern times. As a strategic fibre for navigation, a material used in various dimensions of rural life, or finer cloth, textile hemp spanned different worlds and maintained a complex relation with industrialisation until the collapse of Italian *canapicoltura* during the second half of the 20th century. I will then focus on the case study of a contemporary recovery of hemp farming in the Susa Valley (Piedmont). Here, hemp is a material from which actors imagine a bottom-up reconstruction of the local economy, in the aftermath of deindustrialisation and environmentalist criticism of the harmful effects of economic development. The text is based on an analysis of the historical literature of hemp in Italy, and on ethnographic data collected in Piedmont between 2018 and 2019. This variation in scale and temporality of analysis allows me to highlight long-term lines of inquiry into the social life of hemp: the blurred forms of connection between agriculture and industry, the importance of the technological questions and the role of economic pasts.

Keywords: Cannabis, postindustrialism, territory, textile industry, economic alternatives.

El cáñamo y la industria en Italia: entre los pasados y el presente

Ideas clave:

1. El cáñamo textil tiene una relación compleja y contradictoria con la industrialización en Italia.
2. Como material de navegación, tejido campesino, textil fino, la historia del cáñamo abarca diferentes mundos.
3. Hoy en día, en Italia hay un interés bastante amplio en la recuperación del cáñamo.
4. En el Valle de Susa, el cáñamo permite una re-imaginación de la economía local.
5. El cáñamo invita a explorar la relación entre agricultura e industria, tecnología y pasados económicos.

Resumen: En este artículo se propone un análisis diacrónico de la relación entre el cáñamo y la industria en Italia. Primero, recorre la historia del cáñamo en la Edad Moderna. Material estratégico para la navegación, tejido campesino áspero, o fibra transformada en textiles más finos, el cáñamo textil abarca mundos diferentes y mantiene una relación compleja con la industrialización hasta el colapso de la *cannapicoltura* en la segunda mitad del siglo XX. Después, se explora el estudio de una recuperación contemporánea del cultivo de cáñamo en el Valle de Susa (Piamonte). Aquí el cáñamo es una materia desde la que imaginar una reconstrucción de la economía local desde abajo, tras la desindustrialización y la crítica ambientalista de los efectos nocivos del desarrollo económico. La contribución se basa en un análisis de la literatura sobre la historia del cáñamo en Italia y en los datos etnográficos recogidos en el Piamonte entre 2018 y 2019. La variación de escala y temporalidad del análisis nos permite destacar algunas líneas de investigación a largo plazo en el estudio de la vida social del cáñamo: la relación entre agricultura e industria, la importancia de las cuestiones tecnológicas y el peso de los pasados económicos.

Palabras clave: Cannabis, postindustrialismo, territorio, industria textil, alternativas económicas.

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1. *Introduction*

Under the heading "hemp", the *Enciclopedia agraria italiana* (1954) informs us that in 1950, of a world-wide cultivation of 300 thousand hectares (excluding the Soviet Union), Italian cultivation of hemp accounted for approximately a sixth of the total (representing 56 thousand hectares), and in terms of total fibre production, Italy accounted for almost one third (664 thousand quintals) of 2,040 thousand quintals world-wide production. In 1950, Italy was still one of the most important hemp industries in the world.

Exactly 68 years later, I began ethnographic research dedicated to the study of the social life (Appadurai, 1986) of hemp in contemporary Italy, starting in an Alpine valley in north-western Italy, the Susa Valley, participating in a local hemp association's activities. During the first weeks of fieldwork I bumped into Giovanna¹, outside a bar where I was writing in my notebook and taking advantage of the wi-fi connection. At that time Giovanna was organising a day to clear away weeds from an area in her village that used to be dedicated to the maceration of hemp. She told me that

1• The names of the people met during the fieldwork are anonymised and the ages, where indicated, are approximated.

she had met an elderly resident who owned an old tank for retting hemp and that she had discovered that some nearby mills had millstones for processing the fiber. The discovery of these tools that had survived the test of time moved Giovanna. Hemp has been criminalised and became the object of collective removal, she explained to me. Yet if one looks a little deeper, it is possible to discover how much hemp was present in the lives of people born in the 1930s and 1940s. And how hemp in certain areas, such as her village, was common.

Giovanna's emotion and her search for vestiges of hemp processing express a search for a relationship to hemp's past. From the first steps of my fieldwork in Italy, I have been confronted with the particular role of hemp's past in contemporary hemp-related activities. Depending on the case, a certain past or several pasts – that of a glorious national hemp industry, or family memories of hemp textiles, for example – were related to a complicated present, made up of attempts to emulate, renew, and question this past. A past, or pasts, that seemed to act on the ethnographic present in various ways. In this text I try to investigate this relationship between pasts and present in the contemporary social life of hemp.

The study of the past has encountered anthropology in different ways. Anthropologists have long devoted themselves to archival research mending old rifts (Naepels, 2010), while historians were discovering and using the tools of ethnographic analysis in different ways (Palumbo, 2006). However, alongside the "historicist" reconstruction of the past, proper to the (Western) academic world, whether done by historians or anthropologists, societies have constructed and expressed in various geographical and temporal locations very diverse forms of "past relationships" (Pocock, 1962, as cited in Palmié and Stewart, 2016, p. 208). Anthropology, therefore, is in a way confronted with two different ways of studying the past at the same time: reconstructing it through scientific, "historicist" practices – the past as understood in its own terms – and explaining it under the forms in which it exists socially in groups studied ethnographically – the past(s) as lived in the present (Palmié and Stewart, 2016).

In this text I will cross these approaches, combining different scales of analysis (Revel, 1996). First, I will ask what the past of hemp is as read through the lens of economic history. The first section is devoted to this end. I will describe hemp fibre as a complex material, involving different contexts and modes of production, and participating in varied circulations. In the Italian history of textile hemp, the domestic system remained very important and certain traditional fibre transformation processes, such as maceration, persisted until the interruption of cultivation in the second half of the 20th century. Hemp serves as a marker of multiple evolutions in Italian society and its disappearance indicated the end of certain previous economic configurations.

Secondly, I will ask what pasts are mobilised in the ethnographic present through the initiatives and representations of the actors involved in current hemp-related activities. To this end, the second section presents data collected between July 2018 and September 2019 during my ethnographic fieldwork in Piedmont and Northern Italy. It focuses on a case-study of contemporary recovery of the crop, narrowing the view to the context of the Susa Valley, in the Western Alps. In this region, the plant is the subject of a politico-economic and cultural questioning. Hemp cultivation is collectively imagined and concretely used by members of a non-profit association in order to rebuild local processing chains, in the aftermath of deindustrialisation of the northwest of Italy, and of environmentalist criticism.

The way I retrace the history of the fibre is more aimed at questioning my ethnographic practice than contributing to the historiographic debate². The history of textile hemp in Italy allows me to highlight certain long-term characteristics in the history of the plant, deepening a socio-economic and cultural reflexivity of the plant, and address subsequent questions relating to the case of contemporary hemp recovery in the Susa Valley: what relationships between agriculture and industry are constructed? How are different pasts interrogated? What new meanings does the crop take on? In this way I will make the "historicist" reconstruction of hemp's past interrogate the ethnographic present, whereas I also contend that this ethnographic present makes explicit the forms in which the past is appropriated and put to work by actors in the specific contemporary context of the Susa Valley.

2. *Hemp and Industry in Italy: A "Contradictory" History*

Hemp has been known and used in Eurasia since Antiquity. In Italy the first significant expansion of hemp cultivation began in the 13th-14th century in several

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- 2• Here I follow, in a sense, the way some anthropologists like Sidney Mintz have experienced historiographic reflection. In *Sweetness and Power* (1985) the weight of Mintz's ethnographic work is crucial in orienting the style and the issues of his history of sugar production and consumption. These reflections are inspired by discussions in the EHESS seminar "Capitalismes et environnement. Lectures contemporaines" (2020-2021). I thank the organisers and participants.

areas of the peninsula. Hemp was used for ropes, lines, nets, sacks, rigging, but also cloth, shirts, and sheets. Because of its resistance and rusticity, from the Medieval Ages hemp was considered as a textile well suited for the rural world, and it would remain a characteristic fabric of peasants' wardrobes until the 19th century and beyond (Andreolli, 2005). Hemp, as a fibre, has in its history a "contradictory historical identity" (Poni and Fronzoni, 2005a, p. VIII). It has been implicated in very different circulations, modes of production, and economic spaces: in strong demand from maritime cities for ropes and sails, used in rural cloth production for self-consumption, along with rope manufacturing, transformed for a broader fabric market (Poni and Fronzoni, 2005b; Poni, 2002).

2.1. Hemp to move ships: local specialisations and international markets

During the 13th century, the development of maritime commerce made the supply of hemp fibre strategically relevant. Hemp "became since the Middle Ages the only fibre used in rope manufacturing and, since the 16th century, a fundamental material for the construction of galleon and vessel sails" (Celetti, 2005, p. 41). Large quantities of hemp were needed for the shipbuilding industry.

As Celetti explains (2002), throughout Antiquity, linen was the main material in sail construction. During the early Middle Ages, it was replaced by fustians, a mixed fibre of cotton and wool. Between the 13th and 14th centuries, the drive to increase the tonnage of ships induced a search for sailing structures that responded to new technical requirements. Hemp offered better resistance than cotton, and its diffusion in the European countryside facilitated its supply.

Since the 16th century, cotton cloths [were] increasingly relegated to secondary functions and used mainly to arm galleys; in the same period, on the other hand, hemp sails, used to set up the new sailing ships, [were] in increasing demand, consistent with the development of the 17th and 18th century fleets (Celetti, 2002, p. 830).

The substantial increase in demand for arsenals drove up the cost of hemp as well as demand for areas to cultivate it. This led to the emergence of groups of merchants capable of sustaining investments and organising the transport of fibre. Furthermore, hemp produced for the arsenals acquired specific characteristics and a distinct value compared to hemp intended for peasant consumption (Celetti, 2012).

Due to its strategic role in the navy, hemp was involved in international circulations and became the object of territorial specialisations, as in the Bolognese area. For a port like Venice during the Middle Ages, supplies for the manufacture of ships came from international markets. Venice had a very small territory and its position in the Mediterranean trade allowed it to diversify its supply areas. Hemp for the Arsenal “[came] mainly from Emilia, for a not indifferent share from the Black Sea markets and, to a lesser extent, also from Marche and Piedmont” (Celetti, 2004, p. 122). From the 14th century onwards, international hemp production tended to concentrate in a few territories capable of producing a certain quantity and quality of fibre. For Venice at the beginning of the 15th century these were essentially Bologna in Italy and Tana on the Black Sea, where Russian and Caspian hemp flowed. During the 15th century, however, the new international situation, both in Italy and in the eastern Mediterranean, the expansion of the Venetian territory on the mainland and the hegemony of Bologna in the supply of hemp, made Venice opt for the organisation of national plantations in the hinterland. Although this project did not allow Venice to completely emancipate itself from Bologna’s supplies, it did make possible the survival of hemp cultivation and its stable role in Veneto agriculture from the 18th century onwards (Celetti, 2004), up to the creation of an agro-industrial chain (Celetti, 2015).

2.2. Hemp between domestic system and proto-industrialisation: Piedmont and Northern Italy

In Piedmont, a first commercialisation of hemp was registered in the last centuries of the Middle Ages. During the 18th century some areas began specialising in market-oriented hemp cultivation, in particular in the plain between Turin and Cuneo. This evolution was driven by the demand for hemp coming from the expanding French navy. In Piedmont, hemp cultivation contributed to the transformation of local economic configurations, with the emergence of circulations linked to trans-local markets, and evolutions in the rural production structure. Piedmontese hemp transformation took on specific characteristics according to territorial traditions during the 18th century. This allowed some textile products to be placed on distant markets. One example of territorial specialisation was the Carmagnolese, which became the centre of cordage production, and the main market in the region (Caligaris, 2005, 2008).

As Caligaris (1980) explains, as early as the 17th century, the Piedmontese government had interest in developing fine linen and hemp cloth manufacturing in the Dutch style, from a mercantilist perspective. During the second half of the 18th cen-

ture, to counter the periodic crises in silk and wool manufacturing, linen and hemp sectors received new public investment, alongside an involvement of the noble class. Two paths were taken: one, unsuccessful, based on the idea of manufacturing as a concentration of people and capital. Attempts to develop manufactures following the concentrated model were impacted by technical difficulties and could not overcome the length and complexity of hemp processing compared to cotton. This complexity of processing hemp would increasingly weigh on its costs as industrialisation proceeded. The second path focused on the development of the domestic system, promoted by training skilled labour. As an activity done at home by peasants, cloth manufacturing could be combined with other agricultural activities, reducing the impact of periodic crises and balancing the risks by the diversification of production, much of which was aimed at large consumption. This labour-intensive manufacturing could exist even without significant capital (Caligaris, 1980).

Hemp is thus part of the proto-industrial world that Dewerpe (1984) links to the evolution of urban and rural areas in Northern Italy between 1740 and 1880. The proto-industrial production developed from the 1740s onwards, following the crisis in urban manufacturing, with manufacturing moving to the countryside. Proto-industrial areas were based on alternating agricultural and manufacturing activities at the level of the peasant family. They were located around medium-sized or even small urban centres, at the interface between the broad Alpine valleys, which provided raw materials and skilled labour, and the plain world, which retained control over manufacturing activities. Dewerpe (1984) identifies the market spaces for proto-industrial textile production according to three scales: an international market for silk; a national-regional market for wool and cotton; and a last market, "microscopic but very lively, [corresponding] to hemp and linen, which ensure their outlets in peasant consumption itself" (p. 908). This schematisation points out the differences between textile circulations, in particular the role of silk, and tends to stress the fundamental role of peasant self-consumption in the processing of hemp. This does not, however, erase the different circulations in which hemp fibre was involved.

The proto-industrial model combines agriculture and industry, while ensuring "over the long term both the accumulation process and the dissociation of producers from their instruments of work" (Dewerpe, 1984, p. 910), which will play an important role in the successive phases of industrialisation. The question then arises as to how hemp has participated in these later changes.

2.3 Industrialising hemp: steps towards increased concentration

Celetti (2012) claims that the Italian hemp industry did not develop until the 1870s. In fact, attempts to create "privileged manufactures", supported by the State according to a Colbertist model, as was the case in Piedmont, and Venice, did not survive the transformations following the French Revolution and in particular the end of protectionism. The disappearance of these manufactures, crushed by competition from imported, good quality and cheaper fabrics, contrasted with the resistance of the rural industry, which increased its relative weight in textile production. This limited the space for new industrial adventures, showing the difficulty of industrial mechanisation and management of the production process outside the proto-industrial equilibrium, particularly dependent on the self-organisation of the peasant family (Celetti, 2012).

The first efforts to set up mechanical spinning and weaving of hemp date back to the 1840s, in Lombardy, and were developed by the linen sector. Relatively important factories for the transformation of hemp then emerged from the 1850-60s and especially after 1870 in Veneto and Emilia, and around the shipyards of Genoa and Naples. The growth of the Italian hemp industry saw a Lombard prominence, thanks to the availability of capital and technical skills in this region. During the years 1870-1880s an important acquisition strategy was initiated by the most powerful Lombard companies. Three companies conquered the national market in a few decades and at the beginning of the 20th century their merger led the *Linificio e Canapificio Nazionale* to become the largest manufacturer of hemp threads and fabrics in Europe. During the 1920's, after the First World War, Italian production was formed by this large group and several small producers. At that time the domestic system covered only the needs of self-consumption (Celetti, 2012).

For Piedmont, Caligaris (2005, 2008) describes how the transition to the factory system made the position of textile hemp weaker in a certain sense. In the first half of the 19th century the domestic system had managed to withstand the competition from cotton thanks to the introduction in 1828 of an improved domestic spinning machine. Unlike other textile productions such as cotton, wool and silk, no longer compatible with certain forms of rural processing as factory mechanisation progressed, the pre-capitalist forms of hemp production, based on low technology and the high intensity of labour, kept hemp processing more closely linked to rural processing. In the transition towards a centralised system, hemp lost the strength it had in the proto-industrial equilibrium. Moreover the period between the two centuries was marked by intense migratory flows that particularly affected labour-intensive

crops, such as hemp. Later in the 20th century, the processes of urbanisation and attraction to factory work of the working masses would have further favoured the substitution of hemp with other crops (Caligaris, 2005, 2008).

During the first two decades after Unity (1861) hemp production expanded nationwide very significantly. In the 1880s, however, the crisis in European agriculture affected hemp cultivation too. Other permanent dimensions already weighed on the decline of hemp production by this time: competition from other textile plants and foreign fabrics; the reduced role of hemp in the navy due to the growth in the use of metal chains and other ropes, and the reduction in the use of hemp sails; the effects of the *orobanche ramosa* parasite; the lack of new technologies employed in maceration and subsequent processing steps (Dell'Orefice, 2005). Nevertheless, at the end of the 19th century hemp was still a fundamental crop in the Italian rural economy and Italian agriculture was the second world producer and exporter of hemp after the Russian Empire (Saltini, 2005).

After the First World War Italian hemp exports took advantage of the fall in Russian production, in the context of rising prices for vegetable fibres until 1930. Subsequently, the prices of cotton, jute and abaca suffered sharp reductions due to the fall in demand, while hemp and linen were affected to a lesser extent. This was an ephemeral advantage, however: hemp was further replaced by cheaper fibres. The end of the 1920s and the beginning of the 1930s saw a crisis in Italian hemp exports, along with a sharp drop in national consumption, in the context of the Fascist monetary policy of revaluation of the lira. Hemp during Fascism was the object of particular attention as an autarkic fibre. Hemp production in the corporate system had the aim of developing exports and ensuring national demand (Amadei, 2005). During the 1920s the hemp supply chain was strengthened thanks to the role of the *Linificio e Canapificio Nazionale*, accompanied by the fascist policy of using hemp to replace imported fibres such as cotton. In the 1930s hemp was thus used in sectors from which it had previously been absent and supported by a state purchasing program. With the end of Fascism, the sector suffered a new crisis (Celetti, 2009).

2.4. The decline of hemp production in Italy

Between 1934 and 1941 the hemp area cultivated in Italy increased significantly, and then started declining in 1942. The decrease in Italian hemp cultivation continued after the war, until it finally collapsed in 1971 (Amadei, 2005). As

Dell'Orefice explains (2005) this dramatic outcome of Italian *canapicoltura* was due to long-term problems, already mentioned, such as the replacement of hemp in many sectors and uses, the inability to reach full mechanisation of the sector, especially in the South. Alongside these major questions, the binding hemp organisation system, inherited from Fascist corporatism, also had heavy influence on hemp growing and was maintained until 1963 when the Constitutional Court declared its regulatory system illegitimate, without leading to support policies for this declining sector.

Bonvicini, director of the *Istituto di allevamento vegetale* in Bologna, observed in his speech at the World Congress of agricultural technicians in May 1959, at the FAO in Rome:

For a long time hemp has struggled under the siege of a large number of enemies and competitors, made up of other and more fortunate natural fibres and the more recent but even luckier artificial fibres. Hemp is struggling desperately against the ruthless competition, which is above all of a strictly economic nature. But evidently it does not want to resign itself to dying [...] (Bonvicini, 1959, as cited in Saltini, 2005, pp. 248-249).

Bonvicini identified in his speech various fields of action to save hemp cultivation: research at the international level; genetic improvement; and, above all, mechanisation. In particular, the mechanisation of maceration, which was so labour intensive. To achieve this, industrial maceration should have replaced rustic maceration, practiced by submerging hemp in water near the fields. However,

none of the attempts made so far has obtained, Bonvicini acknowledges, a fibre of comparable quality to that obtained from field maceration [...] It is the identification of the problem which, unresolved, will prevent the survival of the crop, unable to offer, using an industrial apparatus, fibre of the same quality as that provided by traditional practices [...] (Saltini, 2005, p. 250).

This aspect, as maceration failed to separate itself from traditional practices, is revealing. The complicated fibre transformation process, the fundamental role in the history of hemp cultivation of an abundant agricultural labour force, the weight of the domestic system, together with the more successful industrialisation of other fibres made the relationship between hemp and industry particularly complex. Is it possible to refer to hemp's resistance to industrialisation? In order to answer this question, it will be necessary to study in depth the precise forms that the mechanisation of the hemp transformation process has taken, especially in the areas of greatest specialisation. This analysis will then also open the question of why hemp, despite

greatly reducing its role throughout Europe, has disappeared in Italy, while for example not in France. What effective role has been played by anti-drug policies criminalising cannabis? Finally, the complexity of the relations between hemp and industry cannot be fully understood in isolation from a comparison with the industrial histories of other textile fibres, natural and man-made.

What I am interested in emphasising here, however, is that the relationship between the plant and the historical process of industrialisation shows certain tensions: the difficult relationship between the plant and mechanisation, the difficult reconfiguration of the relationship between agriculture and industry, the impact on the crop of larger socio-economic changes at the Italian and international level. All these long-term tensions are useful for me to ethnographically question current attempts to recover the plant's cultivation, in the light of hemp's historical evolutions: what new meanings does hemp take on in contemporary cultivations? What relationship is maintained between agriculture and industry? How are different pasts interrogated and re-appropriated? Can a plant sacrificed by 20th century socio-economic developments – and banned by prohibitionism – be recovered in a post-industrial sense?

3. Hemp in the Susa Valley: Experimenting with Post-industrialism

In this section, I follow hemp in the contemporary Susa Valley (Piedmont, Italy), where the plant has been the object of politico-economic and cultural attention. This is not a unique experience. In Italy today there is a relatively wide movement in favour of a productive recovery of this ancient crop, although the processing potential of hemp, the parts of the plant involved (flowers, fibre, wood, seeds) and the political, cultural, legal and economic frameworks affecting them are all different. Following hemp in the Susa Valley, and a specific local association dedicated to the crop, allows me to question the relations between hemp and industry from a different perspective.

The Susa Valley, like other alpine valleys, is a region of historical industrialisation. Electrical, textile, chemical, iron and steel, railway workshops and mechanical

industries developed in the valley³, at the outskirts of the Turin metropolitan area, itself a fundamental pole of the "industrial triangle" (Milan-Turin-Genoa) that has long embodied the industrialisation of the Northwest. In the last decades, together with the surrounding area, the Susa Valley has undergone a process of deindustrialisation. In this context hemp becomes a material from which to imagine a bottom-up reconstruction of the local economy, at the margins of deindustrialisation and in the light of new ecological awareness.

3.1. Hemp in a contemporary valley: new meanings for an ancient crop

In the Susa Valley in the early 2010s a group of people found themselves sharing a common interest and projects around hemp, the cultivation of which had been abandoned for decades in the territory they inhabited. Hemp had not, however, completely disappeared from their lives. Giuliana, for example, remembers finding towels made of hemp cloth in her grandmother's wardrobes. In the past, in the Susa and Sangone valleys, hemp was indeed present, she explains, but this was a forgotten story when she and three other women decided to found an association to recover the plant. The association, which I will call *Hemp&Hemp*, organises its action around a few main points: bringing hemp cultivation back to the valley, making it and its potential known, developing cooperation around transformation projects. And it soon involved a few dozen members.

The operational project consisted in [...] recovering the history, which is fundamental, and is something that has been incredibly successful. Going and understanding where in the valley [hemp] was grown [...] To recover all the cultural heritage linked to hemp. And in this, yes, weaving, yes, the processing stages, [...] the difficulty of managing a [complex] process such as processing hemp [...] The recovery and promotion of the aspects linked to all the possible uses. [...] In other words, the idea was to somehow manage to create jobs – obviously not in the very short term because it would have been a bit utopian – that was the basic idea, too (Giuliana, 55 years, May 23rd 2019⁴).

3• Personal communication with Giorgio, local intellectual and activist.

4• The interviews were conducted and recorded by me on the date indicated.

The interpretation of the local situation on which *Hemp&Hemp* bases its projects is directly related to questions of what work and what economy are desirable. The 2010s in the Susa Valley were in fact marked by a new impetus of the social movement that has been permeating the valley for decades, the NO TAV movement. Emerging in the 1990s and evolving into forms of popular participation in the 2000s (Caruso, 2010), the NO TAV movement opposes the construction of a high-speed railway line in the Susa Valley, that should be added to the existing railway between Turin and Lyon, and the Turin-Bardonecchia motorway. The movement has a strong environmentalist stance, is made up of different groups and brings together different political cultures around the opposition to the project. The new railway, which involves digging a long tunnel at the base of the Mont d'Ambin between France and Italy, is considered to be destructive of ecological equilibrium and dangerous to human health. More generally, the infrastructure is seen as the emanation of interests that are extraneous to the local context, an imposed project, linked to flows of goods and people drawn from above, without taking into account the territories crossed, the environment and the people who live there.

Hemp is part of a context of proactive responses to the conflict around the infrastructure, which focus on creating alternatives for the local economy (Aime, 2016). The plant thus presents itself as a possible response to the various crises that the Susa Valley territory is going through: an environmental crisis – caused by the heavy work involved in the construction of the Turin-Lyon railway and the previous industrial pollution – and a wider industrial crisis. Today on the valley floor, abandoned warehouses alternate with active industrial plants, and in this landscape where industrialisation and deindustrialisation mix, the NO TAV movement represents a turning point for many. Through it, for example, Rosa came into contact with reflections on "degrowth" and began to question how to build self-sufficiency for her territory. Rosa was a worker in a factory when she started participating in solidarity purchase groups in the NO TAV networks. Later on, she became interested in hemp and participated in the foundation of the *Hemp&Hemp* association. Between 2011 and 2015, she alternated between periods of part-time unemployment and work in the factory. This allowed her to devote time to her studies, to follow the *Hemp&Hemp* association and to get closer to agriculture. She began to cultivate fields and at the end of 2015 was dismissed from the factory. Amidst anguish and second thoughts, she decided to devote herself entirely to her path as a small farmer, and to hemp as a territorial project. She lost a secure job, after more than 20 years of working-class life, enriched by commitment to the union and the radical left. Was hemp the end of industrialism for her and for the valley? I ask her. Not exactly, Rosa replies. In her eyes, hemp was the

possible source of a new industrialism, a resource to allow the development of small industries with more ethical roots.

3.2 Between agriculture and industry: the project of hemp supply chains

The primary objective of the association is to activate the network of knowledge and skills, economic and human resources needed to create the conditions for the beginning of agricultural and manufacturing production of hemp in the Susa Valley.

[...] In the territory of the Susa Valley we are witnessing a progressive impoverishment caused by the economic and industrial crisis. The crisis, far from ending, is progressively causing job losses. [...] We must reevaluate a model in which labour, its role and its functioning are revisited to adapt to this contingent situation of crisis that is becoming more and more structural and irreversible. Starting from these reflections we asked ourselves how we could respond to people's needs by finding raw materials in the territory and asking the territory itself to produce and process them. We asked ourselves basically, 'what is needed?' and although the needs are many and the discourse could actually become immense, we would like to try to compose a small answer through the elaboration and, hopefully, the realisation of our various supply chain projects (*Hemp&Hemp* presentation document).

The association aims to create several supply chains, with a perspective of a bottom-up reorganisation of the local economy. The hemp supply chains are intended to localise transformation projects in the Susa Valley, to bring out and organise local resources, and to achieve an ecological balance between agriculture and transformation. In the association's projects, there is a continuity between the agricultural project (returning to hemp cultivation in the valley) and the transformation project (transforming hemp for different uses). Hemp makes it possible to imagine different processing chains, suitable for very different uses: it is possible to transform its seeds, flowers, fibre and woody stem. In the association's projects these different possibilities combine, connecting small agricultural productions scattered in the territory to create integrated supply chains.

In this exercise of envisioning hemp processing chains for the Susa Valley area, the imaginative influence of industry is very strong. The association investigates the ter-

ritory to imagine its transformation. The now empty industrial warehouses could be transformed to process hemp for green building, for example, or for paper production.

As Mirella explains to me, there were paper mills in her village. In *Hemp&Hemp* they thought that an old paper mill could be taken over and adapted for the production of hemp paper. They tried therefore to get in touch with the company:

We [...] tried to contact a paper mill here. [But] in the meantime they were dismantling [the production site], so we weren't able to talk to them [...] We [however] tried to find out who had the paper machines, because [the town], here, was a place where there were paper mills and there were weavers [too]. [...] Then all was dismantled. So we never found anything, no machinery...

Their interest was not in symbolically reviving production, as happens in some cases where old textile tools are put back into production. "We wanted to try to make paper, but on a large scale, that is, paper to sell, paper reams!" – Mirella smiles as she says these words to me. The past is not only looked at in order to recall old techniques and tools, but so that certain socio-productive configurations can be put back to work again, using hemp and experimenting new transformation dynamics. Mirella's partner Franco, who had worked at the paper mill as a young man, was ready to refresh old ties if the machinery could be recovered.

Franco [...] remembers all the names of all his [old] colleagues and said 'maybe we can go and see the guys. We'll ask them to explain how to do it, what kind of techniques they used, if you macerate before, if you do it afterwards, how to use the machinery', but since we hadn't found the machinery we didn't... we stopped there (Mirella, 60 years, June 7th 2019).

Dreams and projects for the recovery and transformation of industrial heritage confront numerous obstacles. The existing heritage is difficult to recover. Supply chains that have been concretely organised, such as grains for edible consumption, require little capital. By buying and sharing few instruments, the association has succeeded in producing whole and dehulled seeds, flour and oil. Other supply chains, such as textile, have mostly been set aside. Green building, while I am writing, is receiving new attention. In general, the organisation of these supply chains has encountered major difficulties, which are internal to the organisation, but which also refer to a complexity of the plant. For example, the age-old problem of separating the fibre from the woody part of the plant – about which we have already seen Bonvicini's remarks above – is still complicated to solve and, compared to the past when a lot of manual

labour was used to process fibre, small-scale contemporary farmers do not have the same availability of labour.

3.3. *Hemp as a post-industrial material?*

Hemp in the Susa Valley crosses the industrial present and past, looking for ways of production and processing that transcend given models. In this search for alternative economic organisation, a double friction (Tsing, 2005) with the industrial model operates: on the one hand an economic one, whereby, as in Rosa's case, some workers are ousted from industrial production or it migrates elsewhere; and on the other hand a moral one, with the industrialist model, criticised for its harmful effects on the environment and health. For this second point, the cultural weight of the NO TAV movement is considerable. This friction, however, does not prevent actors from trying to recover and rethink machinery and production processes abandoned by industry. Centring a territorial project on a plant (Besky and Padwe, 2016), instead, makes it possible to reimagine connections between agriculture and transformation. Hemp projects "are examples of reconstruction, in addition to resistance" (Schlosberg and Coles 2016, p. 161), they try to reinterpret the way in which needs are satisfied, and envision a bottom-up reconfiguration of material flows.

The organisation's proposal to build local hemp supply chains involves several actors, some of whom are full-time farmers, or people for whom agriculture represents an important source of income for their livelihoods. The others are people who work in different sectors, adjacent or distant from agricultural fields, from company accounting to computer technician, in the valley or in the Turin metropolitan area. Whether for its ecological or political side, whether for a commercial, artisanal or agricultural interest *Hemp&Hemp* is a space where different people meet and dialogue around supply chain projects and their organisational difficulties.

Despite this capacity for aggregation and vision, the supply chains are more a project than a reality, even if small results have been obtained. If the production initiatives, however, are struggling to stabilise and take off, at the same time the association does not stop looking for new starting points to make hemp a resource and an ecological alternative (Pruvost, 2013) for the valley. It is in this sense that hemp in the Susa Valley is a post-industrial material, "not to refer to a predetermined development trajectory but as a way of imagining 'what comes next' in different places facing the

social, economic, and ecological legacies of prior industrial development that continue to influence people's present-day lives" (Vaccaro *et al.*, 2016, p. 2).

4. *Conclusions. Hemp and industry: the pasts and the present*

Over its long history, hemp in Italy has contributed to clothing and equipping the peasant world, entered into international circulations, participated in the emergence of a proto-industrial equilibrium and maintained a controversial relation to centralised industry. Major socio-economic changes between the 19th and 20th centuries challenged the economic role of the fibre. Other fibres took over, the countryside lost its central place of employment, many sectors underwent profound changes, and new materials revolutionised diverse sectors, such as shipping, in which hemp had been central for centuries. Alongside socio-economic causes, in the 20th century prohibition further complicated the life of this plant.

Recovering such an ancient crop today implies coming to terms with its past. In the Susa Valley, and in many other contemporary contexts, it is impossible to speak of hemp without remembering what it has meant locally and nationally. In the Susa Valley, in contemporary activities, the local hemp past mixes with other, industrial, pasts and together both are mobilised to envision new economic possibilities, complement current agriculture and industry, and incorporate an emerging ecological awareness.

Studying the history of hemp helps us think more broadly about the complexity of the past. It shows the different ways in which the same plant (in just its textile aspects, not to mention its flowers) has participated in contrasting local economic configurations, modes of production, and circulations. At the same time, following contemporary hemp social pathways allows us to see how different pasts operate in the present: they weigh on it structurally, influencing contemporary possibilities. But they also represent a material of both a physical and intellectual nature, that can be re-signified in order to imagine new social arrangements.

In this sense the past of hemp is a past that historical research can interpret and explain with its complexity and contradictions. Alongside this "historicist" past, the pasts that are today mobilised and re-interpreted at a local level represent a field that must be the object of specific attention. The ways these different pasts interact

in the present, both at a cultural and material level, and contribute to define locally what is made possible, are what ethnography is called to unveil. Following hemp, thus, not only involves questioning the evolution of the relationship between agriculture and industry, the technological evolutions or prohibition. Hemp history more generally encourages us to not fall into the modernist trap of interpreting the past in a binary and evolutionist way (Roseberry and O'Brien, 1991), and invites us to look at the present taking into account the plurality of pasts that operate within it. A plurality of pasts that can potentially contribute to forging a plurality of the present.

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