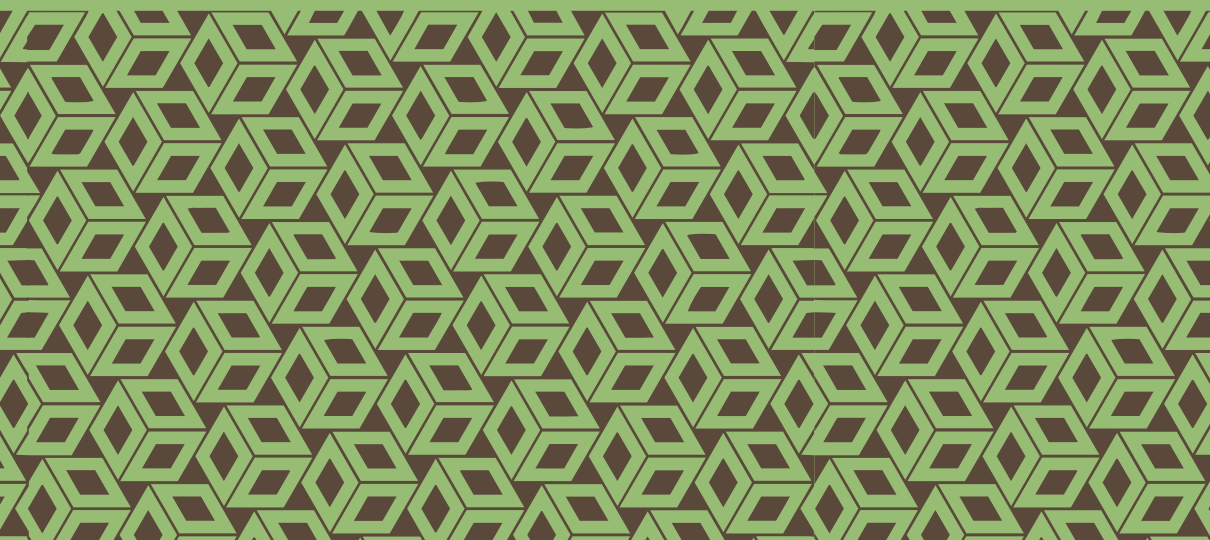# Through the Working Class
Ecology and Society Investigated Through the Lens of Labour

edited by
Silvio Cristiano

**Edizioni
Ca'Foscari**

Through the Working Class

Culture del lavoro

8

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> "Would you tell me, please, which way I ought to go from here?"
> "That depends a good deal on where you want to get to," said the Cat.
>
> (Lewis Carroll, *Through the Looking Glass*, 1871)

Preface

The present volume offers a mosaic of contributions by scholars from different backgrounds, providing a multi-faceted, problematising picture of relations humans as well as between the human and the non-human, investigated by environmental studies and social ecological perspectives, and involving labour. In turbulent times like these, systems ecology, political ecology, social ecology, ecocriticism, ecofeminism, environmental justice, and environmental humanities here follow and interlink one another, thus offering plural insights around the themes of society and ecology, while more or less explicitly envisioning a sustainable and equitable transformative path past the social, ecological, and sometimes psychological unbearableness of current modernities.

Acknowledgements

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Systemic Thoughts on Ecology, Society, and Labour

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Abstract   The present contribution provides a tentative conceptual framework, rooted in systems thinking, to analyse the relations between ecology and society as a starting point to possibly address the interconnected crises by which they are affected. Such framework is also intended to offer a common denominator for the other contributions of this volume; as in most of them, an important role is bestowed upon work and labour as leveraging social and economic agents able to (positively and negatively) shape and reshape nature, society, and culture.

Summary   1 Nature, Society, and Labour. – 2 A Systemic View of Society, Environment, and Culture. 3 Thoughts, Perspectives, and the Significance of the Chapters of this Volume.

Keywords   Systems thinking. Political ecology. Social ecology. Labour. Energy systems language.

> "Fine to think we can go on being socially useful even after we're dead. Making plants grow."
> Lenina, meanwhile, had turned her eyes away and was looking perpendicularly downwards at the monorail station.
> "Fine," she agreed. "But queer that Alphas and Betas won't make any more plants grow
> than those nasty little Gammas and Deltas end Epsilons down there."
>
> (Aldous Huxley, 'Brave New World', 1932)

1   Nature, Society, and Labour

Manual labour has been proposed as the main interface between society and nature (Barca 2014) – or better, by considering the actual embeddedness of the first into the latter,[1] we could reformulate into 'between soci-

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[1]   As for instance in the well-known diagram by Scott Cato 2009.

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ety and *the rest of* nature'. The current ecological crisis[2] (ongoing since several decades in spite of – or maybe right because of – palliatives such as sustainable development and green growth[3]), overlapping with the umpteenth economic and financial crisis underway (that might be seen as cyclical or chronic, e.g. in Day 2018), represents – following Barca (2012) – an opportunity to rethink production so as to imagine a labour culture able to be socially and ecologically sustainable. This could happen by imagining and of course practicing political actions to defend humans and nature altogether (Barca 2012).

Together with an overall re-politicisation of the debate on socio-ecological transformation, as called for by Demaria et al. (2013), we could argue that a re-politicisation of the debates on *labour* is also needed toward such change. Heikkurinen et al. (2018) propose that a desired increase in political action necessarily implies considering the energy (and, we could add, the time) subtracted to desired change by current notions and levels of work and labour, and therefore inviting to imagine ways to break free from the monetisation[4] of work, labour, and action imposed by the current economic model – pursuing an unlimited economic growth – and apparently still widely unquestioned.

Even leaving apart the issue of the exploitation of labour per se, laying at the basis of the creation of profit, sure enough the patent ecological consequences of unlimited profit-seeking production cause damages on the entire human-nonhuman sphere, but it is also true that the first to suffer from such damages are the subaltern classes in light of power relations within society, hence the expressions 'class ecology' and 'power ecology' coined by Bettini (1976, 5).

It is in this context that an increasing interest has been shown in the past few years for what has been defined as working-class environmentalism (Barca 2012): albeit particularly marginalised after decades of neoliberalism, working classes – and subaltern classes in general – are the first to suffer the damages of a pursued unlimited economic growth and labour-oriented existences (e.g. risky and insalubrious neighbourhoods, unhealthy food, etc.) for which they sometimes become unconsciously co-responsible under the constraint of their salary; maybe not so immediately detectable yet perhaps more sincere than a bourgeois environmentalism, the working

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[2] Masterfully described, among others, by Commoner 1971; 1975 and by Commoner and Bettini 1976.

[3] For a critical overview, see e.g. Büscher et al. 2014; Fuentes-George 2013; Latorre et al. 2015; Leonardi 2017; Cristiano 2018.

[4] On this topic, Heikkurinen et al. effectively quote the Manifesto of German group Krisis (1999): "Instead of radically criticising the transformation of human energy into money as an irrational end-in-itself, the workers' movement took the 'standpoint of labour' and understood capital valorisation as a neutral given fact".

class ecological consciousness shows specific features, since it directly and explicitly interlinks on the foreground the protagonist subjects of the productive process and the places where production happens and where workers and their families live, and on the background the means of production as well as the finalised products.

The very results of production, in the form of production surplus, have been proposed as representing the outcome of the society-nature relation (Zinoni 2000, 4), in accordance with the comprehension of the essentials of energy conservation and entropy, i.e., assimilating the thermodynamic implications in daily life (Zinoni 2000, 4). Basing on this, if we slightly zoom out to the transdisciplinarity and environmental humanities[5] presupposed by the considerations made so far and offering a convergence of disciplines into the rest of the present volume (among others, environmental history, ecocriticism, political ecology, cultural anthropology, and social ecology), a particular reference is made in the present contribution to systems ecology (Odum 1983) and its energy systems language.[6]

To shortly justify this, it could be worth to remind that environmental humanities engage with a major guiding theme such as connectivity (Rose, Robin 2004) and that an ontology of connectivity implies mutual causality: organisms and their environment modify each other through recursive relations (Rose, Robin 2004) – i.e., following Bateson's teachings, with events continuously entering into, becoming entangled with, and then re-entering the universe they describe (Harries-Jones 1995, 3) – thus requiring a systemic view allowing for the analysis of direct and indirect influences and feedbacks, also able to catch the frequent non-linearity of connections; at the same time, in ecological systems the laws of thermodynamics have clear consequences (Hannon et al. 1991, 80).

On these premises, systems ecologist Howard T. Odum proposed the energy systems language (1994). It is beyond the purposes of the present work to explain such language in detail, including its major application, brought about with the concept of emergy (Odum 1996; Brown & Ulgiati 2016a; 2016b); however, it might be worth to recall, as pointed out in another contribution (Gonella et al., forthcoming), the potential of systems ecology, emergy, and their language as general epistemological tools,

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[5] Or 'ecological', as for instance per the invitation by Rose and Robin (2004), highlighting how the ecological crisis stands between the natural and cultural spheres, with traditional academic division between humanities and sciences representing a major problem, in company of the general placing of western – or we might prefer 'Global Northern' – science "at the top of an epistemological ladder", all of this limiting our capacity to share knowledge across "fields of plural and diverse knowledges".

[6] After all, as suggested by the Internazionale Situazionista (1992), a different language has to be considered for a lucid, critical analysis of the reality out of the dominion and conditioning of the mainstream; in this case, the energy systems language helps us reconnect to the functioning of the society-ecology relations, out of the tricky mediation of money.

whose often underestimated philosophical potential allows to investigate "deep aspects of the reality as a whole", shedding light onto manifold disciplines, "in the holistic framework of an integrated and 'universal' culture".

2 A Systemic View of Society, Environment, and Culture

As extensively explained in his *Environment, Power, and Society for the Twenty-first Century: the Hierarchy of Energy* (2007), Odum's teachings can be employed to describe and understand society. Building on this, a presentation will follow, supported by diagrams drawn by means of purposely very basic energy systems language, so as to ease their popularisation without the need of an energy systems language background, especially thanks to their embeddedness in the written presentation.[7]
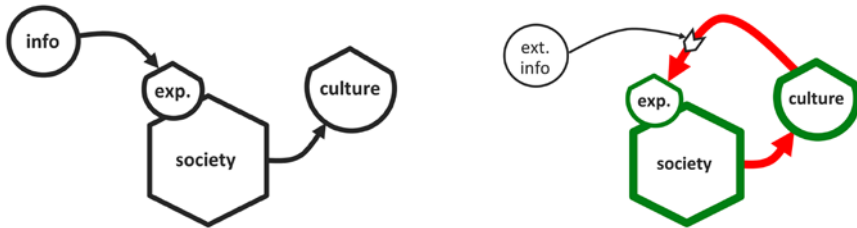
Figures 1a (left) and 1b (right). Basic relation between society and culture

In fig. 1a, the elemental functioning of the production of a culture is shown: a society receives information while interacting with its surroundings and with its experiences ('exp.'), thus elaborating its culture, which in turn (fig. 1b) influences future experiences while interacting with new information that we might now define as external. Some societies have a very strong culture and/or few contacts with the outside, and this creates a significant feedback between culture and experiences (as highlighted in fig. 1b). This seems to be the case of traditional societies, while modern societies tend to be more subject to the influence of external information (and sometimes direction). Traditionally (fig. 2), the culture of a society would be needed for a conscious use of the resources upon which the society can rely, and its

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7 The overall ideas and related diagrams that follow were prepared by the Author and Editor for the contribution at issue, and partly presented within his wider keynote speech 'Cultures, between Global North and Global South. Systemic thoughts toward a socio-economic transition', given during the First North-South Conference on Degrowth-*Descrecimiento* 'Decolonising the Social Imaginary', hold in Mexico City, 3-7 September, 2018.

resulting basic economy – a subsistence economy – would appear as ecologically sustainable, while pursuing the wellbeing of the society, which we could see as individual and collective fulfilment and happiness and which provides a reinforcing feedback that we might call social sustainability.
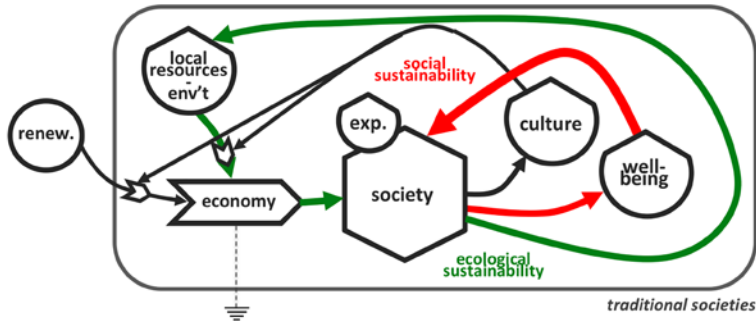
Figure 2. Relations among society, culture, and environment in a traditional society

In modern neoliberal societies (fig. 3), we know that the economy is generally directed from the outside – heterodirected – by means of an ideological narrative that is the result of an economic model de facto imposed also through the expedient of the public debt (see for instance Bersani 2017, 2018). Economic model and public debt contribute to generate and justify an economic growth imaginary ('myth' in the diagram), which clearly influences the culture of a society. In a society like this, still bound to an economic model created upon the denial that human societies and their economies are part of the environment, the notion of waste is introduced, ecologically non-existing in nature after millennia of trial-and-error processes: the idea of ecological sustainability is therefore a mirage not reachable until the circle is closed again (see Commoner 1971). It might be interesting to note that, to allegedly solve an *economic* debt, an *ecological* debt is caused – with the effects for not paying off the latter are likely to be much worse than those for not liquidating the former (it might be worth to remind that, inasmuch focused on money, the economic debt is something that simply does not exist from a geobiophysical perspective).

The systemic main goal[8] of a modern society like the one at issue (fig. 4) changes from wellbeing to wealth, only or mostly measured through

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8   The systemic goal might not overlap with the declared goal, but systems thinking invites to analyse a system for its behaviour, not for its narrative.
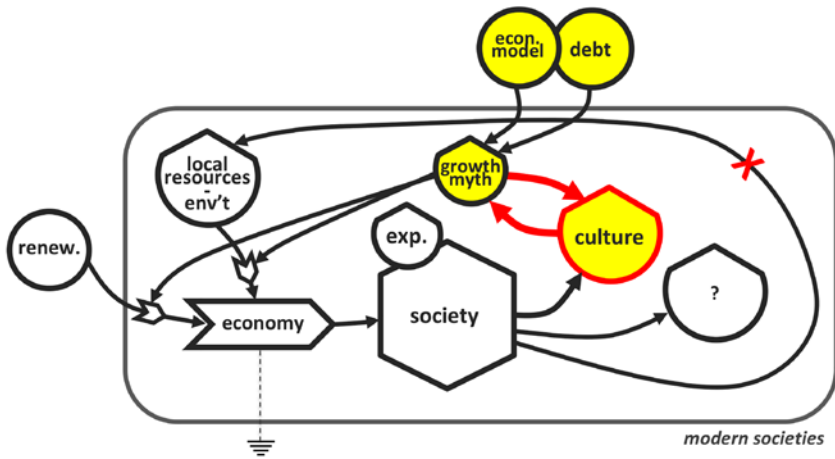
Figure 3. Relations among society, culture, and environment in a modern society: focus on external conditioning
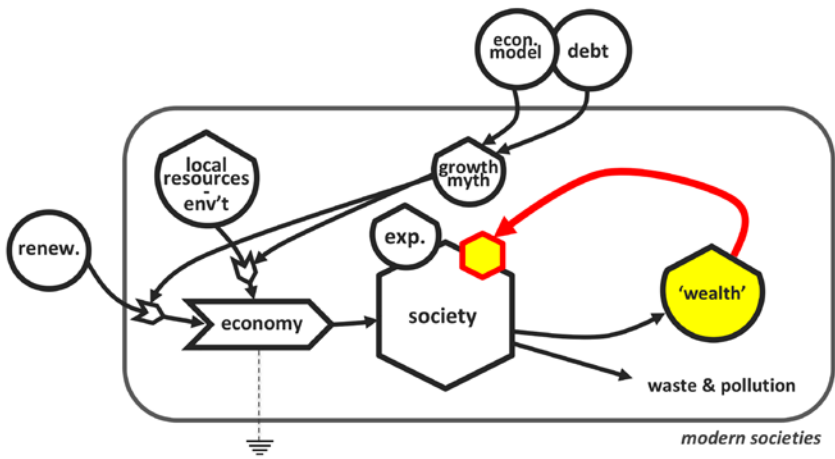
Figure 4. Relations among society, culture, and environment in a modern society: focus on the societal main goal

financial means and concentrated in the pockets of a minority,[9] following a renowned pyramidal social organisation, opposite to the wealth concentration pyramid, which is perhaps not even a pyramid yet another geometrical figure following some exponential distribution. Social sustainability starts to be affected here. Moreover, the features of such systemic goals are quite individualist, and it might be worth to recall Arendt's reflections on modern subjectivism, described as contributing to the progressive alienation of humans from the world ([1958] 1998, 272, as cited by Heikkurinen et al. 2018).

Such societies also depend on nonrenewable resources (driving the industrialisation that substantially gave them their current shape) as well as on cheap labour, which usually requires resorting to the South: the Global South, the South of the Global North, or just the subaltern classes within the same society. A significant portion of the drivers of our societies passes through some form of exploitation (fig. 5): human direct exploitation, direct exploitation of other animals, or direct exploitation of nonrenewable (and sometimes also renewable) resources implying – upstream – indirect exploitation of humans and non-humans for their coemption and use, and – downstream – frequent injustice due to the unequal distribution of waste, pollution, and other environmental effects (e.g. due to climate change) within society and within the larger Earth system.

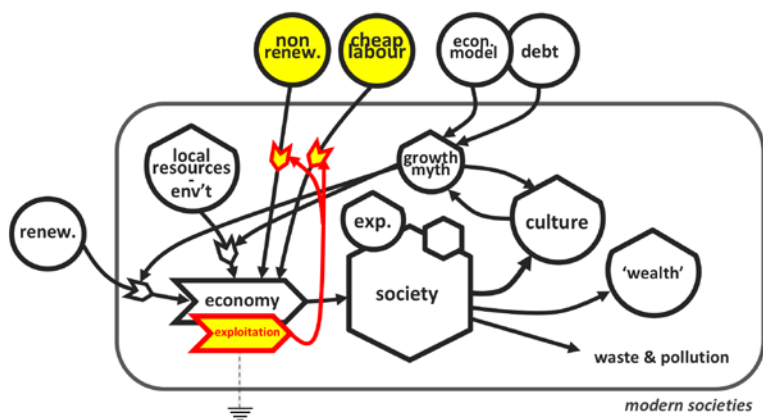Figure 5 – Relations among society, culture, and environment in a modern society: focus on required external inputs

9 Often showing the features of the white well-educated heterosexual male (see Barca's contribution in this volume).

3 Thoughts, Perspectives, and the Significance of the Chapters of this Volume

From a systemic point of view, the origins of the unsustainability of a modern society seem to lie on its driving economic model rather than on the yet problematic ratio of used renewable/nonrenewable resource flows,[10] and involve social issues such as human exploitation, unequal distribution of the societal benefits, and the very creation of a desire for these benefits – required to keep the system working as it is.[11] More in general, one of the major defects can be found in the systemic goal, being: material and mostly measured by money (thus not satisfactory per se, see the famous happiness-income paradox, as recalled and updated by Easterlin et al. 2010); heterodirected, depending on a prescriptive information input instead of being set independently, and only consequently attract inputs; and designed for a minority only (thus providing the system with a very partial, so extremely dissipative and feeble, positive feedback).

Addressing such points seems to necessarily involve a questioning of the triggering economic growth, only aimed at increasing the wealth of a minority in light of the very systemic structure, granted that – however, as noted above – wealth does not necessarily correspond to happiness. Besides, speaking of systemic structure, a disproportioned affluence seems only able to magnify the ecological unsustainability of the system; this is why, even from a pure ecological perspective, the issue of the social acceptability of inequality (and of the luxury it generally brings) appears as a crucial one: an individual change in the lifestyles of the middle class (or sometimes even lower classes) might of course be important to slow down the rhythms of the economic system, but apparently is not enough if we think that most of the wealth flows to a minority.

Of course the discussion provided in the previous section is not an invitation to restore a subsistence economy, but rather to trace back the origins of unsustainability in order to rethink our societal priorities, maybe starting from resetting the very societal goal. Shifting from a quantitative to a qualitative analysis, the issue of exploitation could acquire a larger importance, for its ability to consider injustice towards the non-human as well as within and across human societies, including the individual

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10 However activated by such economic model.

11 As already noted in Cristiano (2018), a crucial issue can be found in the human *pseudo-needs* (Debord 1967, Thesis 51) continuously proposed (or – we could say – imposed and mostly internalised) in the mainstream society to maintain the *pseudo-need* for an ever accelerating societal metabolism (i.e, unlimitedly increasing patterns of production, consumption, resource use, and waste generation) and for the labour upon which it is based. It seems here natural to also refer to Arendt's thoughts on the fact that labour and consumption are aspects of the same process ([1958], 1998, 126).

psychological level. The manifold interlinks between society and ecology highlighted so far cannot but reinforce the need for an integrated approach between science and humanities, as proposed in the present volume. Within such exploitation issue and in the whole system in general, labour seems to play a leveraging role, for its ability to (positively and negatively) shape and reshape nature, society, and culture, while activating, sustaining, and reinforcing the whole system.

A leverage point like labour can be used as a lens to investigate different aspects of the world, as is after all the case in the present contribution, and – in a perspective of change – as a triggering agent of radical transformation of the reality. It is in this perspective that we can read the increasing proposals for an unconditional basic income and for a maximum acceptable income (Liegey et al. 2013) and for working hour reduction to save time and energy for other activities – relations, care, arts, politics, and non-lucrative action in general – while rethinking both paid and non-paid activity in physical (labour) and social (work) terms and experimenting out of the monetary transactions and the debt-based society, as recently noted by Heikkurinen et al. (2018), who also mention community-supported agriculture (see e.g. Lamb 1994) as a promising groundbreaking intuition in this direction.

It seems clear that the key role of labour is true irrespective of the societal will to remunerate it, since – from a systemic perspective with geo-biophysical foundations – labour is required anyway, and the system would not function without it. From a feminist point of view, this is made clear e.g. in Stefania Barca's contribution, where the notion of labour is enriched beyond mere production, thus involving also reproduction and care, and the economy is compared to an iceberg, with only a small part of the overall work being made visible (following Gibson-Graham 2006). However, this is also something natural in emergy approach,[12] shifting from a receiver-side to a donor-side approach (see for instance Gonella et al. 2017), i.e., from the value bestowed to a good or a service by the final user – usually (and erroneously) represented by price – to that related to the very possibility to have that good or service delivered: a sort of memory[13] (fig. 6) of what was required as well as what would be needed for its replacement, and indeed a different idea of value[14] breaking free from the market.

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12   The incorporation of care and voluntary work through the emergy concept is addressed in a number of researches in which the Author was involved: Cristiano 2018; Cristiano et al. 2017, 2018; Gonella et al. 2018.

13   Emergy was originally referred to as 'energy memory', although also able to track matter, information, and labour.

14   Rethinking the idea of value starting from a donor-side perspective involving the memory of what is needed to make something (at least energy, matter, information, and labour – in all its meanings) would also seem as a crucial aspect to address while proposing
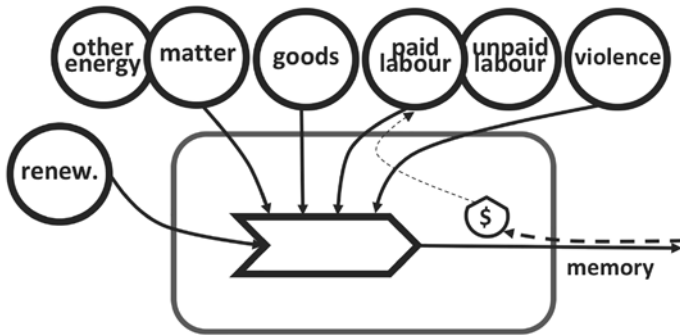
Figure 6. Schematic diagram of memory as addressed in a donor-side perspective

Back to Stefania Barca, her contribution proposed in the next chapter could represent the natural evolution of these premises, while standing out as a masterly theoretical keynote opening to the present volume. In the remaining contributions, more practical examples are reported, all detecting and depicting different experiences of societal and human-non-human issues, and more or less explicitly useful for us to envision a sustainable and equitable change past the social, ecological, and sometimes psychological unbearableness of current modernities.

After Barca, a critical reflection on subalternity and environmentalism is offered by Sergio Ruiz-Cayuela's contribution through an analysis of a working-class migrant neighbourhood in Catalonia facing the consequences of an incineration plant. The link between conditions of social subalternity and ecological disasters – as recalled by Federico Venturini in this volume – is a key aspect in social ecology; this is why he was led to investigate the absence of an overt environmental question in recent (2013-2016) urban social movements in Rio de Janeiro, Brazil, in spite of increasing environmental issues in the area: because of a society with a marked class division, priority seemed to be given to fight class domination.

However, a blur boundary emerges from the definition of 'environmental question', since some elements presented in Venturini might fall instead

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alternative currencies. A step even further could be represented by the involvement of the idea of violence, or exploitation (as also defined in the previous section).

in what Martínez-Alier defines the environmental movements opposing the very material 'effluents of affluence' (1995, 9) or rather in what Guha and Martínez-Alier started to define 'environmentalism of the poor' (Martínez-Alier 2014). For seek of completeness, besides that related to the *COMPERJ* petrochemical complex, illustrated by Venturini and showing a high level of conflict, two more cases with lower levels of involvement are reported in the Environmental Justice Atlas (Temper et al. 2015) for the city of Rio de Janeiro and its immediate surroundings: the first one falls within the category 'tourism recreation' and is represented by the case of *Horto*, where a resistance is happening against 'green gentrification' in the low-income neighbourhood close to the upper middle-class area on the hill sides of the *Serra da Carioca*; the second one deals with the struggle for the remediation of the chemical contamination in the neighbourhood of *Cidade dos Meninos*, in *Duque de Caxias*.

Another interesting contribution addresses the ecophobic discourse arising in the problematic landfill area of Mamak, in Ankara, Turkey, with humans blaming nature for spoiling human practices and plans even in the presence of clear human responsibilities (Yılmaz in this volume), with ecophobia targeting human bodies closely affected by what Martínez-Alier (1995) defines as the 'effluents of affluence'. This was stunningly already present in Italo Calvino's novel *Smog* (1958, 2010), probably a forerunner of environmental humanities: here – paradoxically – "whereas the protagonist is forced to verbally counter and even 'mitigate' the intensity of atmospheric pollution, smog is as a matter of fact a ubiquitous molecular presence saturating literally every corner, especially in and around his body" (Iovino 2017), driving him obsessive-phobic for dust not conceding him any safe shelter.

Literature is after all the protagonist of the rest of the present volume. Rocío Hiraldo's contribution analyses a book by Aldous Huxley and a movie by Colin Serreau, and through them questions ecomodernist socialism while inviting us to reject modern societies from their foundations as well as to overcome "what Marx called alienation from species-being, which involves conceiving ourselves and living as belonging to greater (human and non-human) whole" as well as adopting "communitarian economic systems based upon an even distribution of work". Human and non-human labour is the focus of Fatma Aykanat's contribution, exploring Turkish novels and poems from the nineteenth century while analysing socio-cultural transformation at the dawn of industrialisation. Finally, Joanna Dobson analyses the relationships between human and non-human in industrialised capitalism through an ecocritical reading of a mid-twentieth century novel on working-class life in a mining village in Northern England.

In turbulent times like ours, the contributions of the present volume offer a succession (and often an interlink) of systems ecology, political

ecology, social ecology, ecocriticism, ecofeminism, and environmental justice, providing plural insights around the themes of society and ecology. An interesting mosaic is offered, showing multiple aspects of the key role played by paid and unpaid labour in the relations between society and the rest of nature. By suggesting paths to re-shape our cultures in a direction of actual social and ecological sustainability and to consequently re-think the role and the features of work and labour, the contributions of this volume more or less explicitly envision a sustainable and equitable transformation past the social, ecological, and sometimes psychological unbearableness of current modernities.
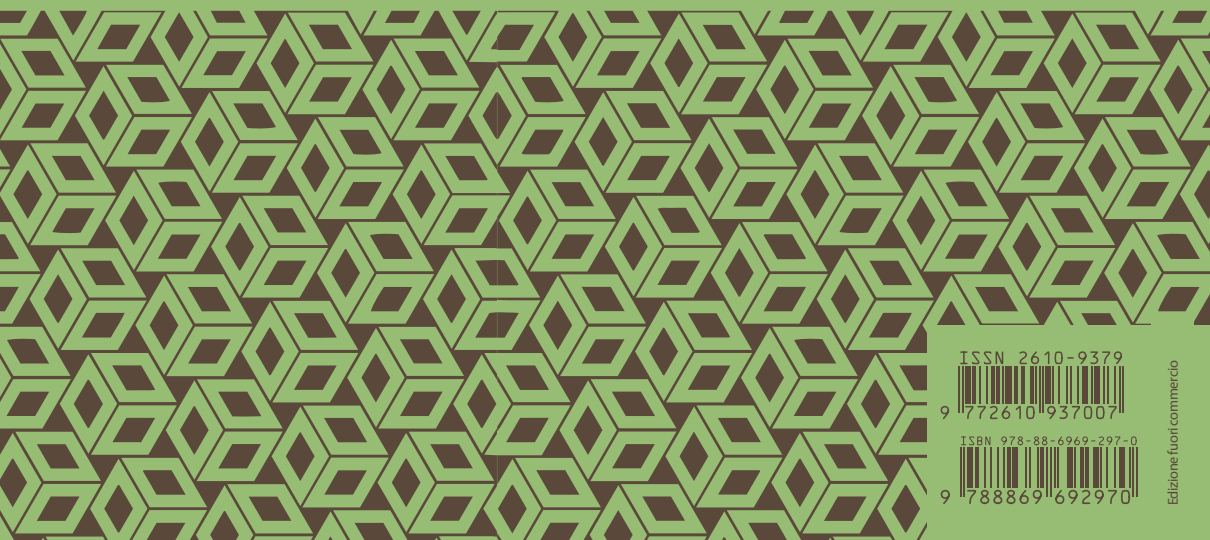
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The present volume offers a mosaic of contributions by scholars from different backgrounds, providing a multi-faceted, problematising picture of relations humans as well as between the human and the non-human, investigated by environmental studies and social ecological perspectives, and involving labour. In turbulent times like these, systems ecology, political ecology, social ecology, ecocriticism, ecofeminism, environmental justice, and environmental humanities here follow and interlink one another, thus offering plural insights around the themes of society and ecology, while more or less explicitly envisioning a sustainable and equitable transformative path past the social, ecological, and sometimes psychological unbearableness of current modernities.

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