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Joseph Beuys' Rediscovery of Man–Nature Relationship: A Pioneering Experience of Open Social Innovation

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Abstract: The emerging paradigm of sustainability represents a challenging field in terms of new technologies, market regulations, and business models. Limits of both linear industrial development and consumerist way of living have been clearly identified since the late 1960s by the first systemic studies on the effect of human activities on Earth. Many contributions from different disciplines have paved the way for an open, participated, and responsible innovation approach, which is presently triggering the transition toward a nonexploitative human development. An anticipation of this conceptual framework can be found in Joseph Beuys' art, which can still represent a source of inspiration for innovators, entrepreneurs, economists, and community leaders. In his artistic legacy—from the six blackboards of Perugia to the 7000 Oaks of Kassel—Beuys is still asking us to transform our everyday actions, joining the collective effort toward a new evolutionary stage of humanity, founded upon a holistic vision of society and nature.

Keywords: Beuys; social sculpture; ecology; open innovation; social innovation; entrepreneurship; sustainable development

1. Introduction

Limits of both the linear model of industrial development and consumerist way of living have been clearly identified since the 1960s by the first systemic studies on the effect of human activities on the environment. Pioneering studies such as *Silent Spring* by Rachel Carlson [1] and the later comprehensive report *The Limits to Growth* issued by MIT in 1972 [2] showed to a broad public for the first time that mankind should reconsider its role in a limited world where available resources and living species, including humans, are not arranged hierarchically and autonomously but through interconnected and fragile networks. Recent analyses are confirming that, in spite of the growing debate, the inertia of both economy and demography is driving the world toward the “tipping point” [3].

Nevertheless, fundamental advancements—even if mostly at a theoretical level—have been registered in setting up a “culture of transition”. We can mention, among others, the enunciation of the deep ecology approach by Arne Næss [4], the enunciation of the responsibility principle by Hans Jonas [5,6], and the introduction of the precautionary principle as part of the 1992 Rio Declaration [7]. Since the Rio Declaration, the concept of sustainable development (SD) has been widely adopted at different policy levels, forcing a sense of responsibility for future generations [8]. A comprehensive vision of sustainable development was finally established with the Sustainable Development Goals 2030 (SDGs), which was approved by the UN Assembly in 2015 [9].

The basic principles embedded into the UN SDGs envisage a circular and socially responsible economy where natural resources are not overexploited and where communities are the effective beneficiaries of economic growth. Binding the preservation of the environment with social justice and

equality is then considered the only possible framework for a long term, peaceful development of human societies [10]. The switch to such a new model, where economic and welfare expansion are no longer sustained by the detriment of the global ecosystem, represents a challenging field of innovation in terms of technologies, regulations, business, and social models.

In parallel to the relatively slow progress in the adoption of SD principles and policies by the public and the private sector, a broad range of bottom-up initiatives have been flourishing, supported by the emerging paradigm of open innovation (OI), which has been expanding from the core technological innovation domain—as initially explored by Chesbrough [11]—to a broader extent, including technology, social, and environmental dimensions [12].

In this study, we will highlight how Beuys anticipated, through his artistic life and production, the combination of social open innovation methodologies, which are presently applied to support a contextual transition towards environmental, economical and social sustainability. The sense of urgency, an open and collaborative approach, the search for disruptive solution to be scaled-up at a global level, the fundamental role of individual engagement and creativity, and the idea of “shaping” the change, which are presently characterizing the social open innovation arena, can all be found along the artistic path of Beuys from the years of the Free International University to the ultimate 7000 Eichen urban art project in Kassel.

2. Methodology

The aim of the present work is to show how the artistic activity of Joseph Beuys can be considered a substantial anticipation of the present crossover between OI methodologies and social innovation practices aimed at implementing the sustainable development model. Nowadays, participated design approaches, such as living labs [13], design thinking [14], and knowledge arenas [15] are widely used to catalyze creative and entrepreneurial energies as well as knowledge and technology providers. Recently, the SDGs have been explicitly recognized among the emerging drivers of OI processes [16], while typical OI approaches, such as crowdsourcing [17] and crowdfunding [18], have already been adopted in a large number of initiatives that are presently supporting both social and environmental resilience at the community level through participated transition management [19] and holistic strategies [20].

Keeping this emerging framework in mind, in the first sections of this study, we will introduce Beuys’ concept and praxis of Social Sculpture, where most of the actual open innovation methodologies can be recognized. The specific engagement of the artist toward the regeneration of the man–nature relationship will be discussed as will his search for an alternative, participated social development. Beuys’ legacy in the field of anthropocenic art will be reported for the sake of a broader representation of the artist’s impact. For the purpose of this study, the artistic contribution of Beuys will be essentially limited to the political, social, and conceptual level, substantiated by some representative works, reports of performances, and interviews.

In the later sections, we will compare some of the contemporary open social innovation practices and their growing influence in the field of sustainable development with Beuys’ Social Sculpture framework, highlighting the actuality of Beuys’ lesson and the uniqueness of his message.

3. Beuys’ Approach to Change: From Individual Artwork to Collective Transition

According to Beuys, the transformation of the world is in the hands of artists, and everyone could become an artist and change the world. Thus, art is a powerful political tool, and education toward art expression is a political project [21]. This concept is embedded in the discipline of Social Sculpture/Social Architecture [22], which he defined “a way to “mould and shape the world in which we live” [23]. Through the social sculpture, everyone can contribute in the shaping of human society by an artistic act, “which could comprehend both physical and spiritual material” (ibid.). For Beuys, transforming the acts of everyday life into art was the only way to really overcome the status of alienation that

characterizes individuals and societies, both in the capitalistic and the socialist world. Interviewed by Dušan Bjelić in 1982, he said:

“My understanding of art is strictly related to everybody’s work. [. . .]. So organically it is related to the working places of the people. And the element of self-doing, the element of self-determination, self-administration and self-organisation is the element of this anthropological type of art” [24].

In Joseph Beuys, such passionate engagement in provoking societal changes meets a deep love for the nature. This attitude is substantiated in an artistic production that is in line with the tradition of German Expressionism, with a large use of abstract and symbolic representations where the artist is presenting himself as a shaman who can connect the interior life of humankind with the hidden powers of nature [25].

As reported by Beuys himself, his ideas about the connection of men and nature were deeply influenced by Rudolph Steiner, whose works he approached in the 1940s, just after the war [26]. The triadic nature of society, which characterized Steiner’s philosophy that combined spirit, law, and economy, was clearly incorporated in Beuys’ conceptual framework. This legacy can be identified through a comparison of the drawing entitled *Other heads on our shoulders* made by Steiner in August 1919 [27], with Beuys’ drawing entitled *Honey Pump* in the MUMOK collection. In Steiner’s work, a rotating wheel is made by three fully interconnected sectors named “commodities”, “labour”, and “capital”, which have the attributes of economic, rights, and spiritual life, respectively. Beuys’ work represents—in a very similar way—the sketch of a motor pumping the honey, with the words “economy”, “law”, and “will” around it [28].

In a performance (an Aktion, in Beuys’ definition) in 1974, Steiner’s triadic representation of individuals was represented through three pots, which signified the three components of human personality: thinking, feeling, and will [29]. Beuys’ scholar Shelley Sacks clarifies the link between the triadic nature of human beings and the need for a positive evolution in the triadic nature of society:

“This threefold human being underpins Beuys’ unflagging commitment to the need for direct democracy, to an associative economics, and to a free educational and cultural sphere that would enable people to realize their higher abilities” [27].

In addition, Beuys’ interest in bees has been influenced by Steiner, who explicitly compared the beehive to the human brain: *“inside the beehive things basically happen the same way, only with slight differences, as they do in the head of a human being” [30].* Both the individual and the social collective mind can be represented through the beehive metaphor, and a transition can be triggered by the adoption of appropriate practices in both. As Beuys said, *“the bee simply collects what is there and takes it to a higher level” [31]* and does that in a collective manner, resembling either the cells in a human body or the thoughts in the human mind. According to Beuys, *“in practical terms, the human being is also a swarm of bees, a beehive” (ibid.)* and *“honey is doubtlessly a living substance. Human thought can also be living” [32,33].*

A framework for transition was defined during Beuys’ participation in the Fluxus movement, which was challenging the traditional *“boundaries between art and life and between the various arts” [29,34].* Beuys expands the interdisciplinary, but individual, experience of Fluxus toward the Social Sculpture concept; the fundamental difference is the entanglement of the artistic process with the social, economic, political, and environmental criticism having the aim of triggering a collective transition and shape society.

Both vision and methodology became clear with the foundation of the Free International University (FIU), whose manifesto was published by Beuys and the novelist Heinrich Böll in 1972. FIU promoted the expression of creativity, which characterizes any human being, as the *“the ability to shape material that could be expanded to other socially relevant spheres” [35].* *“Jeder Mensch ist ein Künstler”:* again, for Joseph Beuys, art was everyone’s capacity and the FIU should support the expression of such potentiality by leveraging the artistic capability of everyone and connecting each individual talent with others and with social challenges. In the promotion of FIU in the United States, under the title *Energy Plan for the Western Man*, Beuys was affirming that:

“Art is the only possibility for evolution, the only possibility to change the situation in the world. But then you have to enlarge the idea of art to include the whole creativity. And if you do that, it follows logically that every living being is an artist—an artist in the sense that he can develop his own capacity. And therefore it’s necessary at first that society cares about the educational system, that equality of opportunity for self-realization is guaranteed” [23].

The event *Honey Pump/100 Days of Free International University*, performed as part of Documenta 6 from June to October 1977 in a room of the Museum Fridericianum of Kassel, was a concrete experimentation of the Social Sculpture concept. Thirteen workshops gave the opportunity to discuss global issues and challenges. The venue was marked by a sculptural installation, a new version of Beuys’ honey pump, which was continuously processing both vegetal fat and honey. Fat was embodying the process that brings chaos to order [29], thus representing the initial “brownian” agitation of disparate thoughts to be transformed into a solid common view that is able to drive the change of society [36]. Honey also has alchemical properties coming from the conversion process of the pollen, performed by the bees.

The characteristic multidisciplinary approach “from chaos to order” of Beuys was fully implemented in the featured series of workshops held in *100 Days of Free International University*. Participants and invited people (including trade unionists, lawyers, economists, politicians, journalists, community workers, educationalists, and sociologists, together with actors, musicians, and young artists):

“pooled and compared their practical experience [. . .] to cover a range of pressing themes in which radical and creative new thinking is urgently needed, discussed in the interdisciplinary way which is otherwise impossible in a world of rigidly separated specializations [. . .] the workshops were an organic part of a work of art (Honey Pump); but they were also a practical forum for the pressing issues of society” [29].

The entrance was free: Anyone could join without application, in line with the participative framework of the Social Sculpture. Hundreds of participants took part, under the concept of “unity in diversity”. Each workshop, except the last one, addressed a specific, hot social and political topic: world peripheries, energy, empowerment of local groups, media manipulation and alternatives, human rights, urban decay, migrancy, the Northern Irish question, possible paths of change in the Third World, violence, and unemployment. The final, 13th workshop was a wrap-up session of the overall period of 100 days. The format of each session was a mix of invited lectures, open group conversations and, eventually, exhibition of art [37]. As in beehives, each individual participant, and not just the experts, contributed to innovate and create new value for society. Figure 1 shows the placard used to present FIU at Documenta 7, with the motto “*Kunst = Kapital*” in evidence.

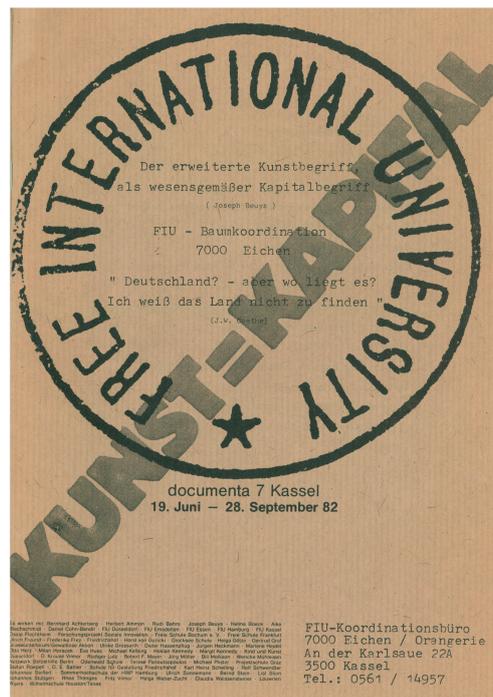


Figure 1. FIU placard at Documenta 7 in Kassel with the equivalence Art = Capital [38].

4. The Political Commitment and the “Defense of Nature”

The FIU period was characterized by a growing active commitment to the German environmentalist movement. In December 1978, Beuys published the *Aufruf zur Alternative* (Appeal for an Alternative) in the *Frankfurter Rundschau* [39]. In this manifesto, the Social Sculpture is proposed as a way to redesign the European society in a radical alternative to Western capitalism and Eastern communism [40]. According to Beuys, money and state control of society are responsible for the postwar “*crisis of consciousness and meaning*” as well as for the environmental crisis. As a matter of fact, Beuys’ political activism had begun a decade earlier with the establishment of the German Student Party (Deutsche Studenten Partei, or DSP) in 1967, which was closely linked to student movements in West Germany, to protest against nuclear armaments and the Vietnam conflict and to promote reform of the education system [41]. DSP was already specifically marked by an interest in political ecology and a utopian approach, with some distance from the Marxist movements. In 1970, Beuys founded the Organisation für Direkte Demokratie (Organization for Direct Democracy, or ODD), whose mission was to support citizens in promoting new legislation, thus giving an alternative to the dominant political party system [32]. A participative process was established to encourage open conversations and discussion groups toward the promotion of referenda on different issues addressing social rights and the environment [42].

Environmental destruction due to heavy industrialization, concerns regarding nuclear escalation, and the growth of student movements were driving the rise of the green movement in West Germany [43]. Beuys found the opportunity to settle at the fundamentals of the new political area, the values of freedom, creativity, solidarity by inviting different alternative movements to join their efforts in a coalition marked by a broadened approach to ecology that incorporated economic equity and individual rights. Die Grünen (the Greens or the Green Party) were intended as the organization able to promote in society the elements of the social order auspicated in the FIU activities [ibid.]. The direct political engagement of Beuys culminated in his candidature for the European Parliament elections in 1979. His campaign was characterized by a poster representing his sculpture *The Invincible*, made in 1963, where a small hare is facing off a toy soldier with a gun, meaning that the spiritual strength, represented by the hare, will always resist against any aggression and violence [40].

The Green Party, also thanks to the growing presence of Beuys in the media, was successful in introducing its key objectives into the German political agenda [44]. However, the progressive integration of the Greens into the institutional system and the adoption of a more structured internal organization prompted Beuys to gradually keep a distance as the praxis became too far from his creative, individualistic, and utopian attitude. His sense of urgency for the conservation of nature and a more equal and free society again found a most appropriate expression in the Social Sculpture practices. After his exit from the active political arena, he dedicated part of the last 15 years of his life to the comprehensive project named *Utopia of the Earth* or *Concrete Utopia*, which had declined in three sites: Seycelles, Bolognano, and Kassel. After the first work in the Seychelles, performed from December 1980 to January 1981 with the support of Lucrezia De Domizio, he started the *Piantagione Paradise*, where 15 hectares hosted a re-established biodiversity through the plantation of autochthonous vegetal species that had been removed for economic reasons, in Bolognano in the Italian region of Abruzzo in 1982 [45]. Beuys' action in Abruzzo opened the debate about the *The Defense of Nature*, which was the title of the public event presenting the *Piantagione Paradise* when Beuys was awarded the honorary citizenship of Bolognano [ibid.].

The third and last action of the *Concrete Utopia* program was *7000 Eichen* (7000 Oaks), proposed by Beuys to Documenta 7 held in 1981 in Kassel (Germany) and directed by Rudi Fuchs [46]. The artwork consisted of 7000 trees to be planted inside the city of Kassel in order to recover the damages lasting from the Second World War.

Trees had to be placed together with basalt stone columns (see Figure 2), with the motto "*Stadtverwaltung statt Stadtverwaltung*" (a forest-like city instead of an administrated city).



Figure 2. (Right), Basalt steles were in front of the Museum Fridericianum [47]. (Left), an oak planted during the 7000 Eichen is now embedding the basalt stele [48].

It was a social sculpture asking citizens to be part of the urban regeneration process, proposing sites, and planting trees in cooperation with city planners, gardeners, and environmentalists. The activities lasted from 1982 to 1987, about one year after the death of the artist. *7000 Eichen* can be considered as a summa of Beuys' philosophy: (i) It combined participation for social change, individual creativity and "beehive" cooperation, regeneration of the man–nature equilibrium. (ii) The oak was part of the legacy coming to the artist from German mysticism and an essential part of the German landscape as well as the basalt stones. (iii) The steles were physically embedding the Social Sculpture process as they were all initially placed in a large pile in front of Museum Fridericianum, which performed such a counter to the end for the whole duration of the project. (iv) All the elements, living and inanimate, of the artwork were considered as part of a long-term transition: The basalt steles dominate at the beginning and then leave the floor gradually to the live oak trees, but they will last as a network of signs

marking the city's landscape with a collective will to save ourselves and the planet [49]. The project was again about individualities to be shaped toward a healing process of both society and nature:

"I wish to go more and more outside to be among the problems of nature and problems of human beings in their working places. This will be a regenerative activity; it will be a therapy for all of the problems we are standing before" [50].

It was financed by a crowdfunding process that merged different kinds of contributions, from sponsorships to donations and funds acquired by Beuys from the sale of his artworks. According to Beuys, the project should awake individuals and organizations from their passive attitude, triggering their engagement into the global environmental change. Today, the effects of this catalyzing effort can be seen not only in Kassel but also in various locations around the world, with a large number of adaptations and commemorations, and especially in the memories and attitudes of all the people who have been part of the project as donors, experts, gardeners, and active citizens.

A further step in the *Concrete Utopia* was the unfinished *Helicopter Project*, where the technological dimension was also incorporated into the Social Sculpture framework. An inaccessible mountain ecosystem in Vallo Malbasso close to Foggia, injured by the artist himself as a young German soldier, should be repaired by a seeding process, scientifically planned and performed from a helicopter representing a technological extension of the human being in the journey of reconciliation with nature. This Aktion, completing the transition from the *"thanatos of the wartime insults to the eros of the Defense of Nature project"* [51], was unfortunately halted by the death of the artist in 1986.

5. Blackboards as Blueprints of the Creative Process

During his artistic performances, Beuys extensively used both his body and blackboards. These were a distinctive tool of Beuys' pedagogical action [52], documenting the progress and the results of the creative process during the Aktion format. This attitude has been likely inspired by Rudolf Steiner [27,53]. Steiner's blackboards were the result of an expressionistic combination of words, diagrams, and drawings. Beuys' blackboards had the same role in representing the result of a unique creative process, as *"living reminiscences and blueprints for further action"* [32]. During the Aktion performances, blackboards were combined with another Steiner's legacy, the *"eurythmy"*, consisting of a sequence of coordinated gestures used by participants to communicate to each other [54].

As art-making is an experience of making and sharing, and as all humans can be artists, teaching is vital because it fosters the recognition and exercise of each potential artist. For this reason, along with the development of a performative language that could trigger political and social change, Beuys was cultivating a distinctive teaching style as a master of arts who has the pedagogical role of assisting emerging artists in finding their way to be part of the change. As Professor of Sculpture at in Düsseldorf Kunstakademie (see Figure 3) from 1961 to 1972 [55] and in performances and events held at FIU or later, he engaged in an interactive dialogue with potential artists, using the blackboards to gather blueprints for future expansion and re-invention (see Figure 4).



Figure 3. Joseph Beuys photographed by Hans Lachmann at the Kunstakademie in Düsseldorf [56].



Figure 4. Joseph Beuys on his lecture “*Jeder Mensch ein Künstler—Auf dem Weg zur Freiheitsgestalt des sozialen Organismus*”. Behind him, the outcomes of the discussion are being fixed on a blackboard [57].

Blackboards were fixing the results of a theatre–theorem, literally a representation of what Beuys was calling the Art–Science, a search “*in which, with actions and works, comes the investigation of the Truth which is the basis for practical action*” [51]. According to W. Wildgen [58], Beuys’ conceptualizations “*are not a pathway towards a scientific model in the strict sense*” but they represent an effort to promote innovative science through “*theoretical intuitions, which can be sketched diagrammatically and later lead to exact theories if a proper mathematical formulation is found and if the predictions of such a model are checked in experiments or evaluated in relation to given observations*”. In such a way, Beuys’ diagrams have the aim to give a sense of direction for an emerging multidisciplinary science that should support the search of solutions for urgent social and environmental challenges.

A key lasting artwork, showing the complexity of Beuys’ reasoning on a sustainable future of earth and humanity, is represented by the six blackboards drawn down in a performance held in the foundations of Rocca Paolina in Perugia, on 3 April 1980. The photographic reportage of

the performance shows Beuys transforming his thoughts into ideograms on the large blackboards, now owned by the Municipality of Perugia and preserved in the civic museum of Palazzo Penna [59]. These six blackboards are of particular interest for the present study as they represent a true transitional program, affording in a comprehensive approach the socio-anthropological, economical, and political implications of refounding man–nature relationship. Looking at the blackboards, we can note the following: (i) In the first one, we see two human figures stay above the Sun—this is the Campanella’s City of the Sun in which systems and institutions are not the result of habits inherited from tradition but the expression of the natural reason of man, the new anthropological position is linked down with nature as well as upwards with angels or spirits. (ii) The new society is founded on a transformative plan, which ensures a democratic distribution of wealth and energy; this concept is represented by a cube, full of distributed power, which wins the gravity thanks to an energized lever. (iii) In the third blackboard, an unfolding string represents the renovated flow of the energy of life; a pastoral stick, connected to the string through a tank, shows the expanded sensory faculties of human beings—the energy of life and the enlarged sensory faculties of man will be all aimed at consciously thinking about a fair right to work and therefore a gain for everyone. (iv) A balance must also be sought between production and consumption; a circular economy process is clearly sketched in the fourth blackboard, where progress in freedom and self-determination is also envisaged. (v) A swan, in the fifth blackboard, would bring a new Lohengrin to help humanity in finding a right balance between statism (gravity) and individualism (entropy). (vi) As represented in the last blackboard, this new community will adopt a permanent process of discussion and decision, surpassing the limitation of the present formal democracy. This open community should include not only human beings but any living creature, animal, and vegetal that is part of the creation.

The six blackboards of Rocca Paolina demonstrate the role of Beuys as a “*pioneer investigator of the role of art in forging radical ecological paradigms for the relationship between human beings and the natural environment*” [60]. In these expressionist blueprints, he was underlining the need of a holistic view connecting the social, economic, and environmental level, preconizing the rise of a circular use of resources and of a socially responsible economy with an equal, distributed, and democratic access to wellness to be reached and maintained without overexploiting the planet. As he stated:

“Ecology today means economy-ecology, law-ecology, freedom-ecology [. . .] we cannot stop with a kind of ecology limited to the biosphere [. . .] the ecological problem is a result of the unsolved social question in the last century. Therefore I say the only thing, which works is again a sort of enlarging of the idea of ecology toward the social body as a living being” [39].

6. Beuys’ Legacy

Beuys had the explicit aim to promote the Social Sculpture as a global movement. He collaborated with Caroline Tisdall and others to explore the possibility of opening FIU sites throughout Europe. In 1974, a representative of the European Economic Community commissioned a feasibility study to assess the possible opening of a Free International University in Ireland [29]. At the end of the decade, according to Tisdall, there were branches of the FIU throughout Germany, even though these branches were political organizations rather than schools. These initiatives were designed around the FIU Manifesto mission of recognizing, exploring, and developing the creative potential of individuals. In such a way, they were political schools where new activists could be educated by the “sculptural forming” actions and could participate in the democratic construction of a new society. This process of “shaping” individuals, who should then be able to “shape” society, was true alternative to both the existing political parties and government education: “*through this lens, Beuys’s work becomes truly politically radical*” [37].

The replication of the FIU model was slowed down by the shift of the German Green Party toward a more regular political organization and finally ended with the death of the artist. Nevertheless, even after his demise, Beuys has been inspiring a number of artists matching environmental and political activism with their artistic expression, such as Mark Dion, Mel Chin, Mierle Laderman Ukeles,

Lilian Ball, and Shelley Sacks [61]. In 1998, the Social Sculpture methodology was formally adopted at the Oxford Brookes University with the foundation of the Social Sculpture Research Unit (SSRU) [62], a gathering of over 150 people. Caroline Tisdall and Johannes Stüttgen opened the SSRU, establishing a direct relation to Beuys' work in developing insights, methods, and practices toward a humane and ecologically sustainable future. SSRU is presently coordinated by Shelley Sacks, who has collaborated for more than a decade with Joseph Beuys in the FIU and is presently running Social Sculpture processes and ecological citizenship projects all around the world [63]. The continuity from Beuys' to Sacks' approach is substantiated in participated initiatives, such as the Earth Forum, a mobile, open, and intensive process where the capabilities of the multistakeholder "responsible participants" are explored in front of the challenges raised by their everyday working, personal, and social life.

In a more general sense, Beuys anticipated most of the themes that can be found in the "anthropocenic art", questioning the impact of humanity on the planet in tight connection with the emerging "anthropocenic science". Among the initiatives of these last years, we can mention the event *The Anthropocene project. A report* promoted by Haus der Kulturen der Welt (HKW) of Berlin in 2014, where art exhibitions, open labs, and seminars afforded in a comprehensive and multidisciplinary approach the aesthetic, scientific, cultural, and ethical questions arising from the dominance of the human species on Earth. In 2013, the Gemeentemuseum in The Hague opened the exhibition *Yes, naturally: how art saves the world* dealing with the clash between the romantic landscapes and the degradation of the environment and suggesting by the exposed artworks, a way to change habits and save the planet. In the same year, the Ps1 of MoMA in New York hosted *Expo1*, an exhibition where the environmental challenges were connected to the actual economic, social, and political instabilities.

The artist couple Lucy and Jorge Orta have recently recalled to memory Beuys' radical wish of provoking a behavioral and social re-shaping toward ecologic awareness, thanks to the dialogue between art and science. In the *Food/Water/Life* exhibition at La Villette in Paris, they illustrated their activity spanning from the study of the Amazonas' biodiversity to art-science installations on environmental crisis in the industrialized world and to an explorative mission of three weeks in Antarctica [64].

The relevance of Beuys and the *Social Sculpture* movement in the research of solutions of a sustainable future has also been highlighted in the exhibition *Radical Nature—Art and Architecture for a Changing Planet 1969–2009* held in London in 2009, which presented a number of multidisciplinary pioneers facing critical questions about the future of the planet. Beuys', Ukeles', and Dion's works have been selected together with the pioneering ideas of the Ant Farm architectural collective, the "planetary garden" concept by Gilles Clément, the visionary structures of Richard Buckminster Fuller, and Michael Pawlyn's biomimetic approach to building design [65].

7. Beuys and OI Methodologies

A unique characteristic of Beuys was the re-acquisition in the sense of capability of "rebuilding rather than conquering new territories, discovering rather than inventing, therapeutically improving rather than replacing" [45]. He described this search of truth, of order in the apparent chaos, as the aim of the Art-Science process of taking back reality to "a phenomenological range of human potential" (ibid.). In this sense, his action fit into the definition of the "neo-Schumpeterian innovator" as outlined by S. Winter, who is able to generate new, disruptive solutions using already known ingredients but in new recipes [66].

This creative approach is the essential kernel of the Open Innovation paradigm, which is now prevailing as the mainstream model to shape innovation, not only in the business landscape but also in the social and environmental domains [12,67], in order to overcome the limitations of rigid systems and regulation in finding answers to complex global and local challenges [68].

In the open innovation processes, the invention is substituted by the discovery; the aim of the process is challenge oriented and innovation is generated by experiments where even unreasonable paths are scouted, discussed, and verified. Disruptive innovations are primarily sought, and the aim is

to generate new radical changes that could modify the reference context, scaling from proof of concept to the global level. The envisaged new organizational model is characterized by a porous structure, with knowledge absorptive capacity and systematic involvement of multiple stakeholders.

Although these practices could be clearly recognized in the Social Sculpture movement, Beuys' legacy and his anticipating action, has not yet been recognized, especially in the field of open social innovation and its applications toward the sustainable development transition. In Table 1, we have summarized some key features of the open social innovation approach that were anticipated by Beuys' artwork and have been reported in the previous paragraphs.

Table 1. Key open social innovation features anticipated by Beuys' artwork.

Social OI Feature	Description	Beuys' Artwork Reference
<i>Participatory mapping</i>	Problems and opportunities are identified by community members as people are best placed to identify their own needs and express their own ideas or solutions.	Approach adopted in <i>7000 Eichen</i> where the sites for planting have been mapped in cooperation with the citizens of Kassel according to their priorities on requalification of areas of the city.
<i>Action research</i>	This method encourages collective problem formulation and problem solving, replacing the usual relationship of "researcher" and "researched" with a more collaborative, iterative relationship where the emphasis is on research "with" as opposed to "on" people. Users are placed at the center of the process.	The whole FIU experience has been characterized by such approach. The FIU Manifesto rejects "the idea of experts and technicians being the sole arbiters in their respective fields." They are requested to work in a "spirit of democratic creativity" together with nonexperts to discover "the inherent reason in things".
<i>Generative paradigm</i>	Along a participated discussion, ideas lead to other ideas and the most fertile paradigms generate new hypotheses, expanding the insight and the possibilities. This feature requires a "creative ignorance" attitude, where the path of discovery leaves the knowledge maps of incremental innovation. Boundaries of fenced systems are overstepped by setting unprecedented connections through system thinking. Serendipity driven results are envisaged.	The symbolism of fat, as well as of the beehive, has been widely adopted to represent the transition from chaos to order, with the proceeding from disparate thoughts to a solid representation of a collective view. The Art-Science discovery process, substantiated by the blackboards, proceeds step-by-step from intuition to evidence, exploring possible connections and paths toward the Truth.
<i>Design thinking</i>	It is a methodology used to solve complex problems, finding desirable solutions for the users. The design mindset is not problem-focused but solution-focused and action-oriented toward creating a preferred future. Logic, imagination, intuition, and systemic reasoning are combined to explore possibilities of what could be and to create desired outcomes.	The Social Sculpture process anticipates the design thinking features. Especially in FIU workshops, a set of problems (global and local ones) were selected and proposed. Participants were asked to offer possible solutions arising from their knowledge, skills, and intuition. Organizers were facilitating the process, setting the conceptual framework, animating, and facilitating selection of the most promising ones and their further proceedings.
<i>Community building actions</i>	A group of people is driven to recognize a common goal regardless of the diversity of their backgrounds. Open and effective communication is set toward the common goals, establishing a sense of reciprocal safety.	We have reported the <i>Piantagione Paradise</i> project where the need of regenerating biodiversity has been shared with local communities that have been fully involved along the process.
<i>Promotion of individual creativity</i>	Individuals are stimulated to share their knowledge in a creative, collective effort. Intrinsic passion and interest in the goals are used as triggers, self-confidence is promoted in a nonthreatening, noncontrolling climate. Combination and recombination, such as the "intersection" among individual capabilities, is incentivized.	This is one of the most distinctive features of the Social Sculpture. Everyone can contribute to change and self-determination, transforming the everyday acts of life into an artistic act by combining physical and spiritual material. The scope of education and performances is essentially to promote this attitude.

Table 1. Cont.

Social OI Feature	Description	Beuys' Artwork Reference
<i>Crowd-based approach</i>	It can refer to “in-kind” contribution (crowdsourcing, as the practice of obtaining needed services, ideas, or content by collecting contributions from a large group of people) and “in-cash” contribution (crowdfunding, as a financing method to fund a project with relatively modest contributions from a large group of individuals, rather than seeking substantial sums from a small number of investors).	The Social Sculpture actions have been supported by a large in-kind contribution, in terms of shared knowledge, time and workforce. Crowdfunding of large scale projects has been implemented through the collection of contribution in change of small artworks. In the <i>7000 Eichen</i> project, in addition to the initial funding provided by Dia Art Foundation, further sources included individual tree sponsorships, donations from many other artists as well as significant contributions by Beuys himself.
<i>Multidisciplinarity</i>	It is the attitude of combining several academic disciplines or professional specializations in an approach to a topic or problem.	Events like <i>100 Days of Free International University</i> are fully coherent with this feature. Participants and invited experts were coming from different disciplines and professional domains. The approach adopted for the discussion was topic oriented, mixing the different contributions during the “search for truth”.
<i>Disruptive and scalable innovation</i>	Disruptive innovation is the introduction of a product, service, or operational model into an established field where it performs better than existing offerings, thereby displacing leaders in that particular field. Scalable, even exponentially, solutions and organizations are expected and promoted. The assumption is that if a problem has been solved by someone and the solution works, it should be globally scaled up.	Beuys is affording global challenges, and his action is aimed at establishing a symbolic reference and an open methodology to scale-up. In the <i>Defense of Nature</i> , replantation artworks are just the beginning of a global action extended to the regeneration of the whole planet.

It must be underlined that Beuys’ legacy maintains its uniqueness in terms of an original combination of open methodologies, social engagement, and radical ecological goals. Beuys has been recently considered a forerunner of the radical Occupy Wall Street movement [69] for the anticipation of some of its collaborative approaches in organizing the protest against financial power and involving artists in representing reasons for the unrest. Nevertheless, this represents a limited acknowledgement of the artist’s legacy, which is not yet exploiting the lesson of embedding art (i.e., individual creativity) into an open process when searching for alternatives to the dominating and unsustainable system.

We consider Beuys’ obsessive attention for the engagement of individuals around a core set of values, a truly distinctive feature of its philosophy and a point of reference for understanding and improving the actual social open innovation dynamics. As a matter of fact, they rely upon collaborative organizational structures and behaviors, but “revolutionary” individuals—the “social entrepreneurs”—are usually pivoting the change, catalyzing the available energies around the transitional actions. The concept of “social entrepreneur”, introduced by Banks in 1972 [70], in the context of the sociology of social movements, has been fully expanded in the Beuys’ direction of individual creative engagement, which can be clearly recognized in the motto “everyone a changemaker” coined by William Drayton, founder of the global network of social entrepreneurs Ashoka [71].

In the OI framework, the new ventures that were started by these game-changers are considered an appropriate link from the experimentation process to the society. According to Curley and Formica: “innovation is knowledge turned into action through creative endeavor that hugely depends on the willingness to start new companies” [72]. The entrepreneur is also promoting a discovery process in the science domain in order to find the appropriate knowledge needed to trigger the transition (ibid.).

In this context, an upcoming generation of innovative entrepreneurs who promote nonconventional solutions for the most urgent environmental challenges is emerging around the world. We can mention, among others, Boyan Slat, a young Dutch entrepreneur who was able to catalyze a huge network around The Ocean Cleanup venture [73] with the “unreasonable” idea to clean the Great Pacific

Garbage Patch, which he plans to half in the next five years; Dave Hakkens, who launched Precious Plastic [74], a global open source movement to apply creativity to the distributed regeneration of plastic waste; Lewis Horne, who has created from scratch Uniti [75], one of the most appealing projects for a radical eco-innovation in the car sector, making leverage of both technical and marketing open creativity along participated design processes.

As in Beuys' vision, "will" is the engine that drives creativity into the transformation of the economy. Thus, the innovative social ventures, flourishing in the open innovation field, could be seen as a new declination of the Social Sculpture action, where the creative attitude of a multidisciplinary team of individuals is "shaped" by the entrepreneur who is scouting the paths toward a globally scalable transition. Thus, we recognize a formidable source of inspiration in Beuys' work for innovative social entrepreneurs who are embracing the Sustainable Development Goals challenges. They should consider themselves "artists" in Beuys' sense, being part of a global open and cooperative movement—a global "beehive" without distinction of disciplines and specializations—of creative individuals engaged to build a better future. Pier Giorgio Perotto—who led design of the first personal computer—affirmed that: *"the world needs poets, scientists, entrepreneurs generating fertile and prolific variances, who operates as systemic creators [. . .], really embracing the creative schumpeterian destruction"* [76]. Joseph Beuys still has many things to teach them.

8. Conclusions

The long-term Beuys' legacy can be found in his ability to implement pedagogic, change-making actions centered on the empowerment of individuals through creative development, with a counter-institutional vision to be brought into a global perspective to address both social equality and preservation of the natural world in a holistic approach [77–79]. He tried to stimulate the interconnection of people to generate a positive change in defense of nature and against the alienation of humanity. His terrain of intervention was Bateson's *"ecology of mind"* [80], the ability of creating situations—at a room, city, or global scale—empowering people's capacity, willingness, and ability to imagine alternative and desirable futures. *"Art is the image of man himself"* (see Figure 5) and of the power to change the world that is hidden in everyone. Paraphrasing Walt Whitman, Beuys' work shows everybody the concrete opportunity and urgency to *"contribute a verse"* to the *"powerful play"* of ecological transition.



Figure 5. Beuys' portrait on a tram in Düsseldorf with his famous sentence *"Die Kunst ist das Bild des Menschen selbst"* (Art is the image of man himself) [81].

As he claimed, it is time to shift from a short- to a long-term view, exploring our creative and entrepreneurial potential for great collective step toward a new evolutionary stage of humanity that is characterized by a holistic view of society, economy, and nature. As a true artist, he really anticipated our time and, in particular, the emerging global generation of social innovators who are trying to afford the challenge of sustainability in the open innovation framework. In this light, Beuys' whole artistic philosophy and production should be further investigated in order to increase the awareness of the fundamental role of art and humanities, together with science and economy, in this crucial phase of human history.

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