A PLATFORM-BASED INQUIRY ON SUSTAINABLE FASHION AND DESIGN IN THE MILANESE METROPOLITAN AREA

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Abstract

The paper presents a work that inquires about the themes of fashion and design from a sustainable perspective in the metropolitan area of Milan. The research borrows methodologies aimed at inquiring about societal issues through data derived from web platforms and attempts to readapt them to discover territorial initiatives. Starting from a relevant stakeholder promoting sustainable fashion and design practices, the research exploits algorithmic recommendations to find new accounts connected to meaningful initiatives. It analyzes them with qualitative, statistical, and visual methods. Thirty-six exemplar cases are identified and used to synthetically describe typologies of promoters of virtuous consumption models active in the studied geographical area. In conclusion, reflections on the effectiveness of the method are presented.

INTRODUCTION

The contribution presents research that inquires about the themes of fashion and design from a sustainable perspective. The research aims to identify meaningful initiatives in the metropolitan area of Milan through collecting, visualizing, and analyzing social media data. The approach is derived from the methodological outlook of Digital Methods (Rogers, 2013) that use web platforms (i.e., social media, search engines, websites, etc.) as proxies to learn about cultural change and societal conditions, with the fundamental underpinning that "the real" and "the virtual" represent no separated realities (Rogers, 2009). It is, therefore, assumed that the interplays that occur on social media (i.e., the use of hashtags or the mentions among users) can be used to inspect relationships at the urban landscape level. Although similar approaches have been widely used to represent and study societal trends and issues, they appear less experimented on a territorial scale.

The objective of the research is to experiment with the application of digital methods to identify innovative sustainability initiatives around fashion and design in a specific geographical area by (1) devising and testing a method to collect data from social media platforms, (2) inquiring emerging topics around the selected themes and the relationships among urban actors, and (3) identifying initiatives connected to sustainable consumption models.

The research is built around the Instagram platform and the account of Manifattura Milano, an initiative of the Department for Economic Development

and Labour Policies of the Municipality of Milan, realized by the Urban Economy, Fashion and Design Project Management[1]. It is a predominant hub that promotes urban initiatives related to urban manufacturing, social inclusion, and the rehabilitation of former industrial areas in cities. It strongly focuses on sustainability and circularity concerning fashion and design. Its account appears well managed, with posts that systematically mention the actors with whom it collaborates, often corresponding to urban figures. For this reason, it is assumed to represent a good starting point for a survey aimed at discovering which Milanese stakeholders (i.e., associations, institutions, professionals, traders, producers, disseminators, etc.) are active in sustainability and circularity and, at the same time, are interested in fashion and design.

BACKGROUND

There is a growing momentum among consumers, policymakers, and industry stakeholders to address sustainability efforts, advocating for greater transparency, ethical labor practices, and the adoption of circular economy principles (Henninger et al., 2017; Potting et al., 2017) to the point that sustainability can be defined as the "mantra for the 21st century" (Dyllick & Hockerts, 2002). The concept of sustainability is complex and multifaceted, leading to difficulties in adopting a unique definition due to the proliferation of multiple theories and perspectives (Purvis et al., 2019). Sustainability can refer to the achievement of socioeconomic equity among people while preserving the natural environment and cultural achievements for future generations (Dyllick & Hockerts, 2002). The notion of the "three pillars of sustainability," very similar to Elkington's "Triple Bottom Line" (Elkington, 1997), is generally accepted as the model that gained more traction (Dyllick & Hockerts, 2002; Giddings et al., 2002; Purvis et al., 2019). It clearly indicates that the overall sustainability of a system relies on three dimensions: economic, environmental, and social sustainability.

Policymakers, institutions, and NGOs are supporting a transition towards a more sustainable fashion industry, having acknowledged it as one of the most impactful ones both on environments and people. Multiple researchers participate in the transition, measuring the phenomenon (Ellen MacArthur Foundation, 2017), reviewing the literature (Arrigo, 2021; Chen, 2023; Prado et al., 2022; Yang et al., 2017), or producing experimentations on business models (Bastos Rudolph et al., 2023; Bocken et al., 2019; Hu et al., 2014). Many works focus on implementing principles of circular economy (Potting et al., 2017) that aim to use resources wisely, increase the lifespan of products and materials, and defer their disposal. The approach promotes the reduction of the production of new items, the reuse of existing products, the preservation of their functional state with caring and reparations techniques, and the recycling of materials at the end of life. It is opposed to the so-called linear economy, which accepts that products are produced, used, and disposed of without recovering materials or parts. In the area of fashion, under the guises of "collaborative consumptions" (Arrigo, 2021; Cardoso & Spagnoli, 2023), developed various forms of strategies successful in prolonging garments life by reselling, renting, and swapping them. Such actions can be supported by services for upcycling (Moisio, 2018) and maintenance. While services are seen as a good strategy to reduce the industry's impact (Ricchiardi & Bugnotto, 2019; Tosun & Tosun, 2023), researchers suggest also focusing on educational interventions suitable for increasing the culture of sustainability, which can potentially be done both in consumers and in retailers. Design practices are recognized as important assets in supporting the transition towards sustainability because they participate in the definitions of productions, experiences, and endurance of the human-made environment (Walker & Giard, 2017). Still, the proliferation of approaches based on the "eco-modern focus on technological advancements" that foster efficiency and support economic growth can be seen as problematic because they are not capable of addressing the issue of over-consumption (Changede et al., 2022).

Digital methods represent a broad suite of techniques and approaches for analyzing digital media, online cultures, and the societal implications of digital technologies. These methods encompass a range of digital tools and analysis techniques tailored to investigate the Internet's digital landscape, affordances, and components. As

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1   The project Manifattura Milano (https://www.manifattura. milano.it/) is implemented by the Centrinno EU project, aimed at showcasing urban cultural landscapes and turning them into inclusive hubs of entrepreneurship for city residents while fostering sustainability (https://centrinno.eu/).

digital platforms have become central to cultural, political, and social life, digital methods have become essential tools for media researchers aiming to understand these domains in depth (Rogers, 2015). The approach utilizes the Internet not only as a research site but also as a source of data, highlighting the intrinsic value of digital traces for scholarly inquiry. Such data can be collected using application programming interfaces (APIs) or web scraping techniques (Krotov et al., 2020; Marres & Weltevrede, 2013). One weakness of the approach is the difficulty in separating the studied phenomena from the features of the platform from which they are observed (Venturini et al., 2018), with platform affordances being both the access and the modifier. Among platform affordances that can be used to conduct similar studies are algorithmic recommendations, namely functionalities designed to suggest contents identified according to the activity of profiling conducted on users to identify their interests. Recommendations proved to affect users' experience, for example, by producing the so-called "filter bubble" that causes feeds to prioritize contents deemed of interest to the user over others, introducing risks that may include radicalization. The presented research aims to experiment with digital methods and recommendation algorithms to study the sustainable transition in a selected geographical area and collect examples of meaningful initiatives.

METHODOLOGY

The research followed a three-stage methodology, in which every step produces inputs for the following (fig. 01). The first stage is the discovery, collection, and categorization of accounts performed on the social media platform and enriched using a netnography approach (Kozinets, 1998); the second is the automatic collection of posts and their metadata, including hashtags and mentioned users; and the third is the visual analysis of networks of hashtags and users in search of clusters of themes and actors.

DISCOVERY AND COLLECTION OF ACCOUNTS

Using the web platform recommendation algorithm, an approach based on snowball sampling (Leighton et al., 2021) on social media was devised to collect actors related to the inquiry theme. Using a virgin account is necessary to prevent the platform from providing suggestions unrelated to the inquiry theme. The research
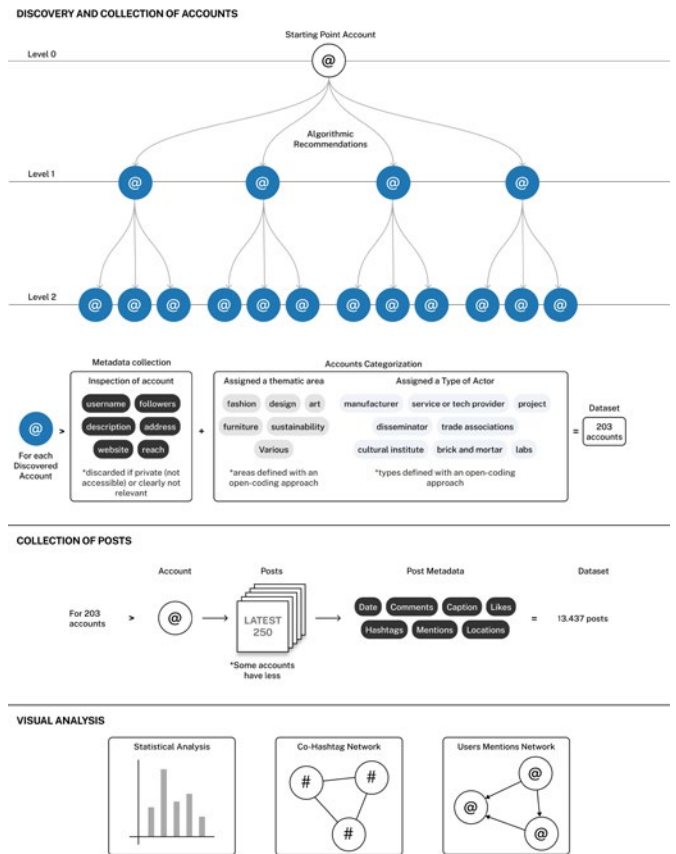

Fig. 01

starts from the account of Manifattura Milano (@manifatturamilano) (level zero) and uses the Instagram "suggested" feature to identify similar accounts to follow (level one). The same process was applied to the newly discovered accounts to increase the number of actors. The accounts are collected into a dataset with further information from the web, as described in Tab. 01, and coded according to thematic areas and actor typologies (Tab. 02 and Tab. 03) that emerged during the research following an open coding approach. The approach, commonly used in the context of grounded theory, is employed to form groups into data for a consequent quantitative comparison (Corbin & Strauss, 1990). The accounts that were private or unrelated to the research aim were discarded. The method produced a total amount of 203 accounts.

COLLECTION OF POSTS

Starting from the accounts list presented above, a Python script based on Instaloader[2] was implemented to collect the latest 250 posts for every

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2   More information about Instaloader can be retrieved from https://instaloader.github.io/

Table 1: Account metadata	
Hyperlink profile	Link and name of the Instagram account discovered during the research
Number of followers	The amount of Instagram accounts that follow the discovered account at the moment of data collection
Website	The official URL of the actor behind the account
Address	The address of the activity (if retrievable)
Description	A brief description of the purpose of the actor
Reach	The reach of actors on an international, national, or local level

Tab. 01

Table 2: Thematic areas	
Fashion	
Design	Active in the industry of fashion
Art	Active in the industry of design or using design to innovate the urban landscape
Furniture	Active in the art field as a creator, collector, curator, or institution (museum)
Sustainability	Active exclusively in the industry of furniture design
Various	Actors with a focus on sustainability and active in multiple fields
	Actors that are not included in the definitions above

Tab. 02

Table 3: Type of actor	
Manufacturers	Designers, startups, brands, or micro-enterprises that provide goods as the main core of their business.
Service or Tech Provider	Actors whose main activity is to provide services or technological solutions.
Projects	Temporary activities that are undertaken to achieve specific goals with defined timelines, resources, and objectives.
Disseminators	Companies or individuals that spread information about sustainability and circularity.
Trade associations	Organizations representing collective interests, advocating, and providing resources and support.
Cultural Institutes	Institutes focusing on research, education, cultural heritage, arts, or traditions.
Brick And Mortar	Businesses that sell goods or services in physical spaces.
Labs	Companies that have design labs open to the public as their core business (mostly digital fabrication).

Tab. 03

Table 4: posts metadata	
Label	Description
code	Identifier of the Instagram post
user	The Instagram handle of the account (e.g., @manifattura_milano), stored without the "@"
date	Date of the post in the iso format YYYY-MM-DD
likes	Number of likes at the moment of data collection
comments	Number of comments at the moment of data collection
locationName	The name of the location associated with the post (string); undefined if not provided
usertags	Users tagged in the picture of the post
caption	The caption of the post
hashtags	Hashtags extracted from the caption
mentionedUsersCaption	User mentions extracted from the caption

Tab. 04

account and, for each post, its data, as presented in Table 4. After setting a threshold of 25 likes, the collection produced a total amount of 13.437 posts. Besides collecting metrics related to comments and likes, the collection allows the discovery of new accounts because they are mentioned or tagged in posts, and the used hashtag is useful to inquire about thematic areas of discussion on the platform.

VISUAL ANALYSIS OF RESULTS

The visual data analysis uses a custom-made tool created on the ObservableHQ[3] platform. The tool[4] visualizes the above data in the form of network graphs (Barabási & Pósfai, 2016) using two visualization techniques. The former, hashtag to hashtag graph, visualizes the co-occurrence of hashtags in the captions of the collected posts and allows the discovery of thematic areas of discussion. Nodes represent hashtags and are connected if used in the same post caption; size represents the occurrence of hashtags in the body of collected posts. The latter, user-to-user graphs, visualizes mentions among users (i.e., a user that mentions other users in one or multiple posts). The users mentioned extend the previous list; therefore, the graph reveals further actors in the area of interest. Nodes represent users, and size represents their occurrence in the body of collected posts.
The final visualizations are produced using different software. Gephi (Bastian et al., 2009) is used to improve the spatialization of nodes thanks to the Force Atlas 2 algorithm (Jacomy et al., 2014). In the case of hashtag to hashtag graph, the Louvain method (Newman, 2006) is used to recognize groups of strongly interconnected nodes that can be recognized using colors. Finally, the graphics are finalized using vector editing software to visually polish them. The resulting network graphs have been printed and analyzed using the visual network analysis method suggested by (Venturini et al., 2015), which invites the researcher to label clusters and subclusters, linger on the empty space that separates them, and identify the bridge nodes, namely those that connect different clusters. The analysis led to the identification of labeled

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3   ObservableHQ is a web platform for the creation of Javascript code notebooks. The platform simplifies the creation of data-oriented visual solutions (https://observablehq.com/about)
4   Access the tool at this url:
https://observablehq.com/@iosonosempreio/visualizing-instagram-data-from-zeeschuimer-v1-5-0

communities and the most important hashtags they contain. Annotations are then integrated into the visualizations for a conclusive presentation.

RESULTS
TOPICS AND URBAN ACTORS
A quantitative analysis is used to understand which categories are predominant among the discovered accounts. It reveals that the most present actors are cultural institutes, producers, service providers, disseminators, and projects. Laboratories, brick-and-mortar shops, and trade associations seldom occur. Design is the most present thematic area, followed by sustainability, art, and fashion. Most of the actors, however, ended up uncategorized because they were too diverse (category "various"). The fact that brick-and-mortar and labs appear not well represented may require further research to better understand the role that such actors, which include retailers, play in relation to sustainability on a local scale. When looking at thematic areas against the actor's typology, the analysis suggests a non-homogenous distribution, with disseminators generally focused on the theme of sustainability, cultural institutes on art, producers on fashion, and providers on design. The distribution of local actors appears only satisfactory, resulting in 44% of the discovered accounts. Local actors are predominant among Cultural Institutes and Service or Tech Providers and well represented among all the other typologies of actors (fig. 02).
The network of hashtags, qualitatively analyzed using the visual network analysis, is used to grasp information concerning the discourse about sustainability and circularity in different thematic clusters. In the lower-right corner, the pink nodes compose the cluster that is named Sustainable Fashion, in which hashtags like #consciousfashion, #reducereuserecyle, #criticalfashion, #noplanetb, #zerowaste, or #innovation bring attention to the roles and responsibilities of fashion in switching to a more sustainable production. In the above right angle, there is a Jewels cluster, with hashtags like #poeticmetalworks, #poeticjewellerydesign, #handmadejewelry, or #independentdesigner. The cluster appears to be focused on artisanship with a limited interest in sustainability, represented by the marginal presence of ideas related to slow jewelry (#slowsimpleseasonal, #recycledbrass). Jewelry is adjacent to two clusters: the Made in Italy and
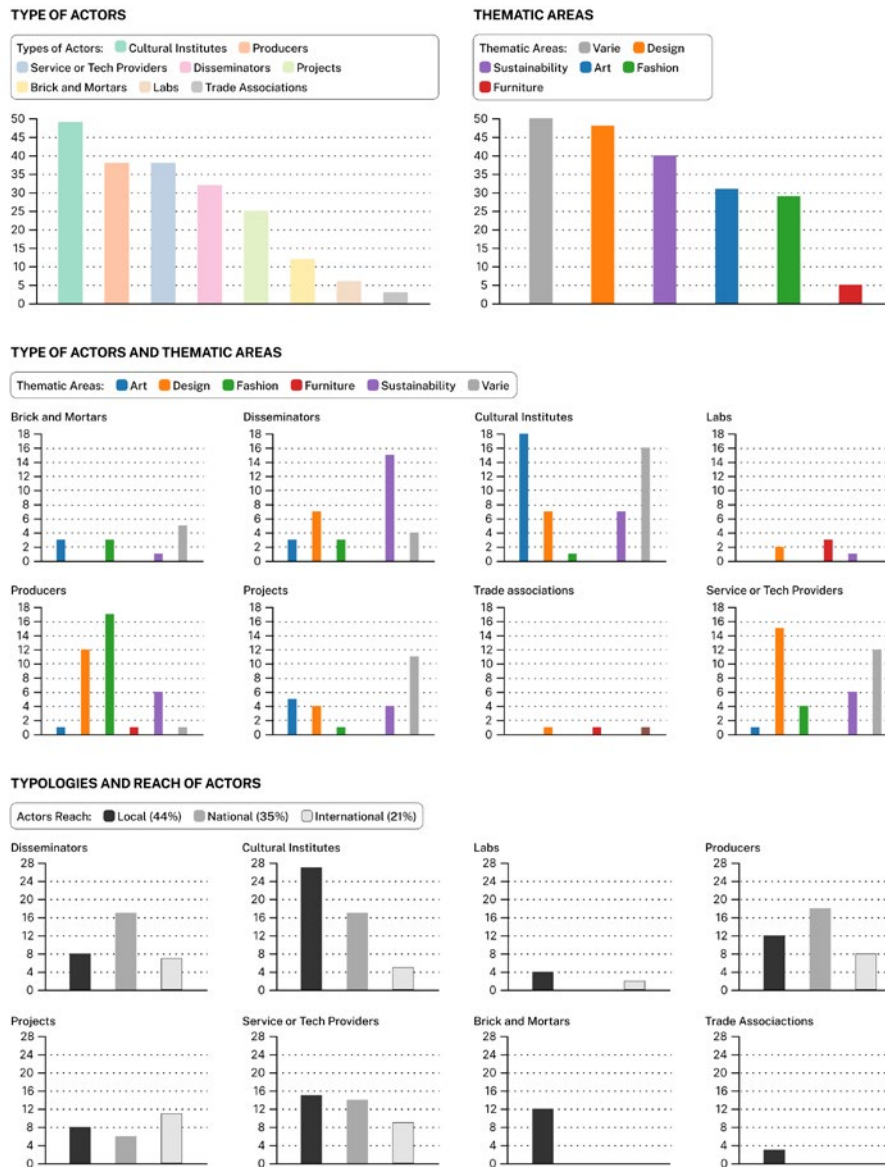
Fig. 02

the Interior-Architecture clusters. The formers touch upon #madeinitaly, #handmade, #vintage, #shoes, and luxury fashion on demand; quality and style appear to be predominant to sustainability. The second cluster focuses on architecture, and more specifically on the landscape (#landscapearchitecture, #masterpaesaggio, #gardendesign) and interiors (#homedesign, #surfaces, #designshowroom, #moodboard). Another big and important cluster is the one of Artistic Production (#contemporaryart, #artist, #culture, #masterpiece, #drawing, #photography, #artecontemporanea), which is visibly influenced by posts produced by actors located in France or Venice. Even in this case, there is a thematic lack in relation to sustainability and circularity. Still, the analysis may suggest that art can play a role in the communication of positive and progressive messages. A smaller cluster, also related to arts, is one of the Alternative

Exhibition Spaces, which testifies to the existence of unexpected shopping windows dedicated to art in certain train stations. Design and Circularity (#designers, #milandesignweek, #repubblicadeldesign, #rigenerazioneurbana, #tunnelboulevard, #t12lab, #dacosanascecosa, #adi) is the last remarkable cluster, which testifies the commitment of Milanese designers in working towards a more circular and sustainable city, also in terms of social sustainability. The visualization analysis suggests that the topics of circularity and sustainability are not equally distributed in the recognized clusters, with some paying more attention to them (fig. 03). The network of mentions among users is used to understand the most interconnected actors and to reveal further accounts that can be inquired into future iterations. The blue nodes represent the account identified in the first iteration, while the purple nodes appear after analyzing mentions

in posts. The visualization reveals a central agglomerate with important Milanese accounts that work across design, innovation, digital fabrication, and art. Among them are important projects of urban regeneration; although they are not the ones that mostly occur in our dataset, they appear as the most interconnected. We can find institutions, universities, and news outlets among the newly appeared nodes. Another cluster collects accounts oriented to the fashion industry and dedicated to promoting ethical and sustainable approaches. Another cluster is related to arty accounts that appear strongly connected with Venice, although some newly discovered ones appear locally in Milan. Art is also trending in the cluster of

alternative exhibition spaces, which includes several artists and designers. The last cluster describes the network of a slow luxury fashion brand (fig. 04).

PROMOTERS OF VIRTUOUS CONSUMPTION MODELS

A close reading analysis of the discovered accounts reveals thirty-six examples of local initiatives that nurture sustainable consumption models in the Milanese metropolitan area (Tab. 05). Initiatives are described in relation to their thematic area and commented on in relation to the theoretical background of the research. In *fashion*, there are examples of innovative usage of locations that are readapted to host collaborative consumption
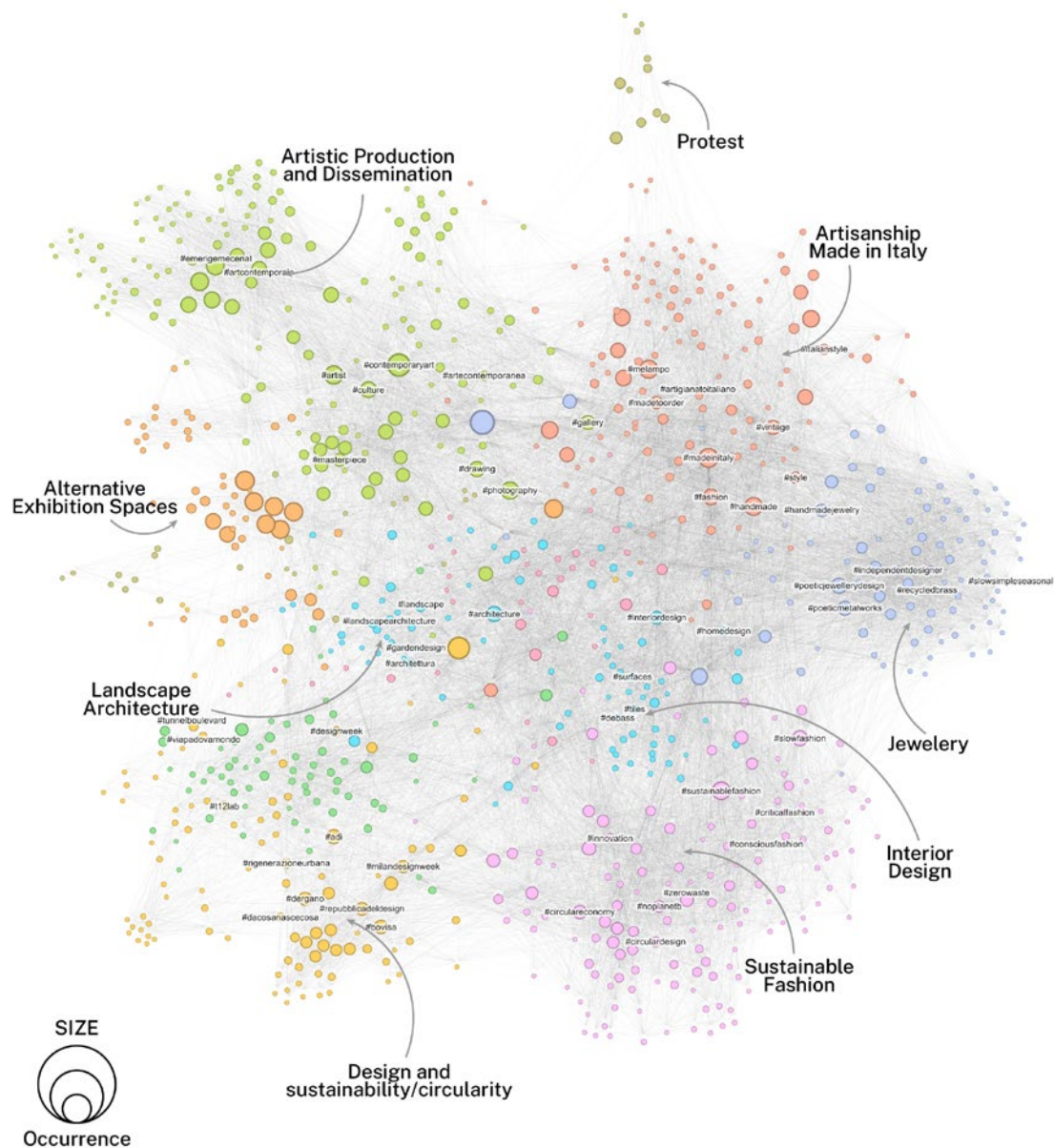

Fig. 03

Fig. 04

events; no initiatives of collaborative consumption appear to be related to brick-and-mortar businesses. Some accounts represent initiatives that make use of sustainable materials to produce garments or jewelry or that promote upcycling techniques to prolong the life of products or their materials. Such initiatives are complemented by disseminators and institutions that promote slow fashion and communicate in very diverse ways, including influencers, journalists, and theater performances. In design, it is possible to recognize initiatives connected to the production of new products and experimental projects aimed at social sustainability. Some accounts represent laboratories that promote and teach circular strategies for prolonging the lives of objects and furniture, upcycling, and recycling techniques; at the same time, they offer inhabitants places and occasions to meet and strengthen social relationships. One

specific example focuses on social and public space design, creating social contexts capable of fostering sustainable behaviors. Other accounts represent design studios specifically oriented to sustainable products aimed at hindering overproductions or using systemic approaches to help businesses become more sustainable. The local actors that fall into the sustainability thematic area are mostly disseminators who affirm themselves on social media as promoters of sustainable materials, brands, solutions, and behaviors. From a more general perspective, it appears that sustainability initiatives are connected to a social dimension, with many cases that create occasions for collectively learning, designing, making art, and strengthening relationships at a neighborhood and urban level.

Table 5: the selected thirty-six accounts of sustainable initiatives

Account	Description
@chezbabettegaragesale Reach: Local Actor Type: Brick and Mortars Thematic Area: Fashion	A vintage shop hosted in a garage with a high number of followers. They create various initiatives around collaborative consumption.
@co_atto Reach: Local Actor Type: Brick and Mortars Thematic Area: Varie	Situated at Milan's Porta Garibaldi station, serves as a research and collaboration hub, driving hybrid projects that merge diverse experiences and skills. It aims to infuse the city with innovative partnerships, fostering connections with local dynamics through a diverse lineup of events. Emphasizing its role as a connector and activator, it embodies a cross-disciplinary ethos.
@milanogreenforum Reach: Local Actor Type: Cultural Institutes Thematic Area: Sustainability	Organisation dedicated to hosting people who talk about environmental issues in every field and who can create knowledge and business
@manifattura_milano Reach: Local Actor Type: Cultural Institutes Thematic Area: Sustainability	Manifattura Milano is the platform dedicated to craftsmanship, urban manufacturing, and the circular economy in the fashion and design sectors
@ciq_milano Reach: Local Actor Type: Cultural Institutes Thematic Area: Varie	CIQ: Centro Internazionale di Quartiere. A place where to organize cultural activities like concerts, courses, workshops (adults, children), thematic dinners, movie projections, book presentations, exhibitions, etc. The aim of CIQ is to nurture proposals of a creative, artistic, and social nature with a focus on internationality
@ecologista.imbruttita Reach: Local Actor Type: Disseminators Thematic Area: Sustainability	Divulgator VERY MILANESE on themes of ecology and sustainability
@milanoisgoood Reach: Local Actor Type: Disseminators Thematic Area: Sustainability	Milano Goood promotes active citizenship and a sustainable lifestyle
@materiarinnovabile Reach: Local Actor Type: Disseminators Thematic Area: Sustainability	Renewable Matter is an international online magazine focusing on the bioeconomy and circular economy. It delves into various sustainability topics, such as waste recycling, renewable materials, and innovations contributing to a circular economic model.
@falegnameriacuccagna Reach: Local Actor Type: Labs Thematic Area: Furniture	Falegnameria Cuccagna, part of Cascina Cuccagna in Milan, offers woodworking spaces for education, skill-building, and inclusion. It focuses on empowering young migrants through vocational training and promotes integration. The project advocates for community engagement, social fabric enrichment, and creative exchange, fostering an inclusive social enterprise.
@designdifferente Reach: Local Actor Type: Labs Thematic Area: Furniture	Fablab focused on the circular economy, also offering space for events or retail
@conservami_attrezzeria Reach: Local Actor Type: Labs Thematic Area: Sustainability	A space where it is possible to repair objects of Various kinds, from bicycles to furniture, including garments
@rub.objects Reach: Local Actor Type: Producers Thematic Area: Design	Design studio focused on creating a bridge between industrial production and craftsmanship to reshape the current overproduction and consumption paradigm
@materialsfortransitions_polimi Reach: Local Actor Type: Producers Thematic Area: Design	MaDe/Trans focuses on investigating emerging materials from a designer's view, developing research, applied projects, and knowledge transfer activities
@opellamilano Reach: Local Actor Type: Producers Thematic Area: Fashion	Opella realizes fashion and design jewelry, the product of research and experimentation with new materials
@melampo_milano Reach: Local Actor Type: Producers Thematic Area: Fashion	The contemporary Italian fashion brand specializes in "slow luxury," creating on-demand pieces with upcycled materials, not for every item but significantly present across their collection.
@_tunnel_boulevard_ Reach: Local Actor Type: Projects Thematic Area: Design	Project for the regeneration of the public area via Pontano with its railway tunnels through activities of social design and public art that promote the participation of active citizenship, thus creating social cohesion (from obstacles inside the city to a public area suitable for everyone)
@dacosanascecosa_rdd Reach: Local Actor Type: Projects Thematic Area: Sustainability	The project involves redeveloping the Bovisa district to gradually shift habits towards the conscious use of waste materials, transforming them into beauty (e.g., benches for the community).
@t12lab Reach: Local Actor Type: Service or Tech Providers Thematic Area: Design	The cultural association and research agency focuses on social and public spatial design, employing recycling as a strategic and technical element. They specialize in creating site-specific installations, custom pieces upon request, and limited series production. Their signature project, "Tunnel Boulevard," exemplifies their approach to integrating recycled materials into urban design initiatives.
@wfawebfashionacademy Reach: Local Actor Type: Service or Tech Providers Thematic Area: Fashion	Leading Waste Couture regenerative production chain made in Italy since 2009. The brand identifies the waste of value and the value of waste. Guarantees to the consumer fashion and design products that were created respecting the rules established by the Waste Couture Protocol for production processes designed to make the closed cycle.

Tab. 05

Table 5: the selected thirty-six accounts of sustainable initiatives	
Account	**Description**
@milano_greenweek Reach: Local Actor Type: Trade Associations Thematic Area: Furniture	A week dedicated to exploring and celebrating Man's commitment to community welfare, participation, and sustainability. Through various activities, it aims to engage participants in experiencing and understanding the city's sustainable practices and civic engagement.
@oof_outoffashion Reach: National Actor Type: Cultural Institutes Thematic Area: Fashion	Leading platform for the promotion of sustainable fashion
@circularmaterials_ Reach: National Actor Type: Disseminators Thematic Area: Design	To empower and inspire designers with a materials palette for a circular economy. Consulting specialized in circular materials
@fashionwithmission Reach: National Actor Type: Disseminators Thematic Area: Fashion	An educational platform on responsible fashion practices
@lamiacameraconvista Reach: National Actor Type: Disseminators Thematic Area: Fashion	Journalist and blogger working on sustainable fashion, made in Italy, food, lifestyle, and traveling. Collaborates with Connecting Cultures and Out Of Fashion
@sfashion_net Reach: National Actor Type: Disseminators Thematic Area: Fashion	Sfashion-net is a network promoting slow, critical, and independent fashion brands. They support a new fashion interpretation, celebrating small enterprises oriented toward slow fashion.
@threen.it Reach: National Actor Type: Disseminators Thematic Area: Sustainability	Magazine about sustainability, discussing different topics (sustainability, fashion, beauty, health, food, etc.)
@tantarobasostenibile Reach: National Actor Type: Disseminators Thematic Area: Sustainability	Ideas for being sustainable every day
@curiousgrid Reach: National Actor Type: Producers Thematic Area: Fashion	Curious Grid is a Unisex clothing brand created through the visionary journey of love for old vintage things. The idea is created by upcycling stocks of fabric pieces left over in mills and yarns unused at the factories and creating classic yet modern fashion.
@repainted_beachwear Reach: National Actor Type: Producers Thematic Area: Fashion	Repainted is a fashion label integrating marine conservation awareness with luxury design. Utilizing regenerated Lycra, their production process emphasizes eco-friendly practices. Garments are handcrafted in Italy, underscoring a commitment to quality and sustainable fashion. Through upcycling, Repainted'ss operations contribute to waste reduction
@magasintorino Reach: National Actor Type: Producers Thematic Area: Furniture	Restyling, upcycling, and creative recycling techniques to refurbish antique furniture and home decor items in collaboration with local artisans and artists. This approach integrates traditional craftsmanship with contemporary artistic expression to preserve and transform functional art pieces
@mixcyclingsrl Reach: National Actor Type: Producers Thematic Area: Sustainability	Innovative startup developing organic material blends by recovering plant-based industrial waste
@sartediscena Reach: National Actor Type: Projects Thematic Area: Fashion	Movement for supporting the rights of show business tailors (females)
@officinecircolari Reach: National Actor Type: Service or Tech Providers Thematic Area: Design	A consultancy specializing in systemic design and the circular economy aimed at optimizing resource value and minimizing environmental impact. They provide strategic advice, eco-product design, and effective communication, focusing on economic, environmental, and social sustainability. Their services cater to private entities, public bodies, and the third sector, promoting fresh ideas and professional approaches to sustainability.
@sssuperlocal Reach: National Actor Type: Service or Tech Providers Thematic Area: Design	SUPERLOCAL™, established in 2015 by Andrea de Chirico, is a research-oriented design studio based in Turin and active in Milan. It focuses on the localized production of everyday objects, critically examining and promoting the concept of regional manufacturing as a sustainable practice. The studio operates across multiple platforms to explore and implement strategies that enhance local production capacities.
@climatestandard Reach: National Actor Type: Service or Tech Providers Thematic Area: Sustainability	Climate Standard produces certifications created to provide a benchmark for companies interested in climate sustainability and embodies the most important research, guidelines, and technical reports from specialized bodies in the global landscape.
@recircle.it Reach: National Actor Type: Service or Tech Providers Thematic Area: Sustainability	A project aimed at developing a digital platform that connects major Italian enterprises interested in green waste disposal to facilitate their participation in a circular economy. The platform's objective is to enable cost-effective waste management communications between entities that view waste as a low-cost raw material and those needing to dispose of it economically.

Tab. 05

EFFECTIVENESS OF THE METHODOLOGY

The research has identified numerous actors considered to be local, although over half of the discovered accounts are active nationally and internationally. It was noticed that accounts suggested at the first iteration of the snowballing process (fig.1) are more likely to belong to the geographical area of interest. In contrast, the noise increases in the second iteration. The result can depend on Milan's status as an international hub, which still contributes to a better understanding of the initiatives related to the inquiry theme. Visualizing user mentions only partially maintains a local focus, occasionally linking to accounts of low relevance to the investigated theme. The hashtag network offers interesting insights into the research area, but their territorial specificity is unclear. An analysis of post metadata reveals that only a small part of these indicate a location; when they do, they are, in most cases, far from their area. Therefore, it seems not feasible to use localization to learn about the theme of inquiry in the intended area.

Ultimately, thirty-six local accounts were selected as exemplary in promoting virtuous consumption models. These cases were pinpointed through close reading, as visual methodologies based on platform metrics proved ineffective to this goal; still, they helped in effectively browsing the number of discovered accounts. The correspondence between accounts and initiatives was not always well recognizable, as many were not explicitly dedicated to sustainable fashion and design actions. For this reason, all personal profiles were discarded.

In conclusion, the recommendation algorithm provided numerous examples of sustainable fashion and design initiatives, albeit only partially aligned with the desired territorial focus. Future studies might identify more effective strategies to achieve a territorial focus, for example, by nurturing more clear profiling, selecting local hashtags to study, or exploring direct connections with local initiatives.

CONCLUSIONS

The research experimented with applying methods derived from media studies to inquire about sustainable fashion and design initiatives in the Milanese area. The methodology exploits recommendation systems of social media platforms to collect examples of initiatives related to the inquired themes. The conducted work mixed qualitative (close reading) and quantitative (data visualization) approaches to analyze data, themes, and actors and to produce a selection of thirty-six meaningful territorial initiatives about sustainable fashion and design. Still, in the produced data, we mainly find accounts that refer to non-territorial initiatives, with only 44% of discovered actors clearly traceable to the territory under analysis. This raises doubts about the method's efficacy: does the signal overcome the noise? Although the research was successful in gathering promoters of sustainable initiatives, further research can be conducted to understand how to employ similar techniques to inquire into territorial contexts more effectively.

CAPTIONS

[Fig. 01] The diagram represents the research protocol that exploits algorithmic suggestions and other affordances of the social media platform.

[Fig. 02] Statistical analysis of results, displaying quantities concerning the performed categorization.

[Fig. 03] The network graph visualizes the co-occurrence of hashtags retrieved from the captions of the collected posts. Hashtags are connected if appearing together in one or more posts. Only the most relevant labels are displayed to reduce cluttering in the visualization.

[Fig. 04] The network graph visualizes mentions among users (i.e., a user who mentions other users in one or multiple posts). The users mentioned extend the original data; therefore, the graph reveals further actors in the area of interest.

[Tab. 01] Metadata was collected for each discovered account

[Tab. 02] Descriptions of the thematic areas used to categorize the discovered accounts

[Tab. 03] Descriptions of actor typologies used to categorize the discovered accounts

[Tab. 04] The script is designed to collect the above metadata from posts and to organize them in a new dataset.

[Tab. 05] The table describes the thirty-six selected accounts representing initiatives that embody sustainability projects of different types in the Milanese area.

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