

Digital Media in Semiotic Research in Italy

Francesco Mangiapane

Summary. This essay retraces how the internet and the digital media in general have been approached by semiotics in Italian studies. The essay begins by noting that many of the issues arising from the advent of the digital communication, such as the dialectics among “apocalyptic and integrated”, the role attributed to technology in the process of the transformation of societies and the debate over the models of knowledge (eg. Eco’s remarks on the tree as a metaphor of knowledge as opposed to the labyrinth or on the limits of the interpretation) were discussed and already on the agenda of the discipline several years before the diffusion of the internet. Then, it deals with the first studies on digital artefacts, mostly focused on the communicative aspects of websites and their interfaces, as well as on the novelty represented by the “short texts” disseminated in new media (banners, clips, gifs etc.). After that, it shows how, starting from the studies of Floch ([1995] 2000), the discourse over digital media matures and produces a vast series of essays covering the socialisation processes on the web and in social networks. In such a scenario, the web is less a “topic” to be examined than an environment to be investigated in search of specific forms of interactions occurring in specific discourses (politics, marketing, food etc.).

Keywords. Italian semiotics, technology, digital media, social media, the internet

Zusammenfassung. Dieser Aufsatz zeichnet nach, wie das Internet und die digitalen Medien im Allgemeinen von der italienischen Semiotik behandelt wurden und werden. Ausgangspunkt ist die Feststellung, dass viele der Probleme, die sich aus dem Aufkommen der digitalen Kommunikation ergeben – wie beispielsweise die Dialektik zwischen „apokalyptisch“ und „integriert“, die der Technologie zugeschriebene Rolle im Transformationsprozess der Gesellschaften und die Debatte über verschiedene Wissensmodelle (z.B. Ecos Bemerkungen zum Baum als Metapher des Wissens im Gegensatz zum Labyrinth oder zu den Grenzen der Interpretation) – bereits mehrere Jahre vor der Verbreitung des Internets in der Disziplin diskutiert wurden. Der folgende Abschnitt widmet sich insbesondere den ersten Studien zu digitalen Artefakten. Diese konzentrierten sich hauptsächlich auf die kommunikativen Aspekte von Websites und ihren Schnittstellen sowie die Verbreitung von „Kurztexten“ in neuen Medien (Banner, Clips, GIFs usw.), die mit hoher Innovationskraft einhergingen. Nachfolgend wird gezeigt, wie sich

der Diskurs über digitale Medien ausgehend von den Studien von Floch ([1995] 2000) entwickelt hat und eine Vielzahl von Aufsätzen hervorgebracht hat, die primär die Sozialisierungsprozesse im Web und in sozialen Netzwerken behandeln. Die Sichtweise auf das Web entwickelt sich also vom „Thema“, das untersucht werden soll, zu einer Umgebung, die nach spezifischen Interaktionsformen in verschiedenen Diskursen (Politik, Marketing, Lebensmittel usw.) untersucht werden soll.

Schlüsselwörter. Italienische Semiotik, Technologie, digitale Medien, soziale Medien, Internet

The interest in digital media developed in the area of semiotics comes as a natural continuation of the latter's mission of analysing contemporary texts in view of the construction of a philosophically grounded theory of language. This commitment is urged by demands coming from outside of the discipline, with regards to society as a whole¹, on the one hand, whereby the community of semiologists are expected to actively monitor and assess the progressive changes led by the advent of digital communication. On the other, from within, that is, by the community of scholars and practitioners of the discipline² itself, who are, so to speak, challenged by the specific textualities and the peculiarities of online interactions as compared to those of traditional media.

1. Before the web

However, on closer inspection, the semiotic interest in the net model comes before the web itself, as this term becomes a metaphor for a fundamental epistemological change in the conception of knowledge, which the discipline helps to promote. We are referring to that which – to use the title of a popular text by Umberto Eco (2007) – we could define as the passage *from the tree to the labyrinth*, or the progressive shift from a conception of culture understood in terms of hierarchy to a structural, process-oriented one, non-linear and rhizomatic by definition. Already in his *Treatise on General semiotics* [known as *A Theory of semiotics* in English], Eco ([1975] 1976: 21–28) embraced an idea of culture associated with Lévi-Strauss's structural anthropology (according to the axes of production, exchange, and kinship), indicating how “culture can be studied completely under a semiotic profil” (*ivi*: 28). If such an equivalence may seem obvious nowadays, it constituted a clear ‘reticular’ and anti-ontological positioning of the discipline with respect to the opposite hypothesis linked to the historicist-oriented metaphor of the tree.

In short, from the very beginning, semiotics has viewed culture as modelled through the metaphor of the web. *La svolta semiotica* [The semiotic turn] by Paolo Fabbri (1998) carries this shift forward, advocating the aban-

donment of a semiotics of signs and codes in favour of new models of analysis of culture as an ever-changing configuration (semiosphere) of texts.

But there is more: in a famous article from as far back as 1973 recently republished (Fabbri [1973] 2017: 65–70), Fabbri takes a position on the different perspectives of semiotics and sociology in the analysis of the issues emerged from the study of mass communications; he points out how the sociological approach to the media as outlined by Marshall McLuhan (1964) and summarised in the famous slogan ‘the medium is the message’ revealed a weak point that was anything but negligible. According to Fabbri, these studies upheld an admittedly reductionist hypothesis according to which, of the messages circulating in society, only the role of the expressive technological infrastructure from which they originated should be considered; conversely, the meanings, stories and narratives they conveyed was to be neglected and deemed irrelevant. While not denying the epistemological and interpretative value of McLuhan’s reflections, Fabbri highlights their inadequacy: a theory of mass communication cannot be developed by considering only the infrastructural aspects of the media system, without dealing with the stories they circulate.

In this context, by embracing the task of developing a theory of culture, semiotics has an extra gear: it can subsume McLuhan’s description of media dynamics by problematising its input within a broader and more exhaustive system that aims at modelling the relationship of reciprocal presupposition between enunciative infrastructures and the utterances ascribed to them, as well as, in more detail, between the expression and content of these same utterances. Considering the enormous success that McLuhan’s theories have enjoyed in the approach to the study of the media by social sciences and, in particular, sociology; and considering that starting from the activity of the *Toronto Center for Culture and Technology* – founded by McLuhan himself – a recognised group of scholars continued the intellectual legacy of their master, persisting in the assumption of a primacy of technological tools over content, also with regard to the study of the internet and the new media (see for example de Kerckhove 1995, 1997 and in its wake, in Italy, Granieri 2005, 2006, 2009). Fabbri’s objection proves to be fundamental in identifying the threads of the debate on the study of the digital sphere. In it, on the one hand, we can recognise a McLuhanian approach, often distinguished by its enthusiastic and cohesive tone towards the emancipatory role of ‘new media’; on the other, a strand that can be traced back to Fabbri’s standpoint outlined above, advocating a rethinking of the role of technologies in functional terms as delegated non-human actants, capable of replacing human intervention in some functions. Being in a continuum that seamlessly connects humans and non-humans, technology reveals and shapes the cultural, ideological and political values of the society of which it is a part. In this regard, a fundamental role is played by the interdisciplinary field of science and technology studies (STS)³ and by the group of researchers whose activity draws inspiration from the work of Bruno Latour.⁴

However, the same 1973 essay by Paolo Fabbri allows us to take a critical stance also with regard to sociological models of analysis known as ‘content analysis’ applied to the study of media texts. As Marrone points out in the introduction to the new edition of the essay:

In an attempt to study the information content of mass communication messages, the content analysis practiced by sociologists implicitly poses all the problems of linguistic semantics, while seemingly discounting the operational suggestions of the latter. In this, according to Fabbri, it “reveals a pre-Saussurian epistemology” which, on the one hand, does not take into account the complicated problem of the rather frequent presence of multiple expressive substances (verbal, images, music, etc.) within the same message; on the other, not knowing how to handle specific textual units, ends up cataloguing traditional and unrefined linguistic entities such as words or, rarely, brief summaries. Hence the taxonomic fury that characterises it – ineffective in fact in its explanation of the media – and the consequent need to replace the notion of message – a black box without internal articulations – with that of text, based instead on the Saussurian principle of *tout se tient*: that is, of a semiotic entity that exists thanks to its pertinent internal articulations and its clear boundaries towards the outside (Fabbri [1973] 2017: 25–26, my translation).

Considerations of this kind may constitute the root of a possible critique of contemporary market research and analysis carried out through querying huge databases and digital archives made available by the user interaction practices on social networks. These queries – mostly carried out by searching keywords or tags – in fact return results that can be evaluated on the basis of the same arguments put forth by Fabbri and emphasised by Marrone. Based as they are on the naive notion of ‘word’ or ‘message’, they fail to reveal the internal articulation, the text, of which these would be a manifestation, instead producing a hyper-segmentation (or hyper-mapping) of the plane of expression (hence the “taxonomic fury” evoked by Marrone) devoid of the necessary relation of correspondence (reciprocal presupposition) with the plane of content, except in reflexive terms. This is indirectly confirmed in Dondero’s essay (2020: 169–193) which, starting from an analysis of the contribution to image theory by Media Visualization scholars such as Lev Manovich and his Cultural Analytics Lab, on the one hand, indicates the extraordinary possibilities offered by the visual exploration of large corpora of images, archived through digital media; on the other, it underscores how the semi-symbolisms that can be inferred from such surveys concern the meta-visual organisation of the corpora, or the relationship that the single images maintain with the collections to which they belong, and leaves aside the problem of their meaning and semantic stabilisation. Conversely, it could be objected that in a semiotic perspective every segmentation of the text – whether it be operated by the analyst or the social networks user – can only be aimed at some interpretative hypothesis, and the question of meaning cannot be eliminated from the concrete

practice of dissection. The clear unwillingness to assume a definite stance towards the predicative content of the images and the transformations they undergo in relation to the collection they belong to, which Dondero attributed to Manovich (Dondero 2020: 193), runs the risk of not taking into account the fact that the meaning is already in motion, produced as an effect of the gesture of segmenting the text in a certain way rather than in another. Choosing not to express oneself on what the meaning of this gesture might be does not prevent the eventuality that someone else might decide to exercise such interpretative power, proposing, as often happens in Sociology and Marketing, easy ‘integrated’ interpretations of complex social facts thanks to the illustration of visual patterns inferred from social media corpora. Not infrequently, such patterns are created without taking the trouble of demonstrating their composability, in textual terms, into a model constituted on the basis of an assumed reciprocal presupposition of expression and content; and in that exemplifying the kind of naivety that Fabbri imputed to content analysis. Alongside Dondero’s contribution discussed above, an interesting direction is suggested by the research work of Valeria Burgio (2021a and 2021b) and Valentina Manchia (2020), aimed at reconstructing the boundaries and rhetoric of ‘data discourse’ by addressing the powerful translational role that information visualisation strategies play in the articulation of reality, despite their apparent neutrality; thus, the way in which ‘data is given’ (or presented) by old and new media can be the object of criticism, bypassing the contention that, being self-evident, they can speak for themselves.

Another line of enquiry concerns the question of competence. The attitude of openness towards complexity that must be taken in the face of the ‘knowledge crisis’ triggered by the advent of social media⁵ (Weinberger 2012: 8–15) can be traced back to such fundamental contributions as *Opera aperta* by Umberto Eco, which, already in 1962, analysed contemporary art’s new stance of openness and ambiguity towards multiple interpretations of the world. The same situation of crisis and a demand for openness towards complexity arises from the social scenario reconfigured by digital media, too often accused of being stupid⁶ on the basis of ‘pyramidal’ epistemological models (whose strategy could be summarised – again according to Weinberger (2012) – with the slogan “knowing by reducing”): these are unable to profitably manage the new forms of knowledge production, characteristically extensive (that is, handled by large audiences of subjects), without borders (with contributors from all over), populist (inclusive regardless of roles and hierarchies), accredited by the ‘others’ (or based on the reputation recognised by others to subjects that are active within the community rather than on the titles that these same subjects have), and unresolved (that is, which do not seek decisive answers but on the contrary postulate disagreement as a systematic element to be managed adequately) (see again Weinberger 2012: 20–21).

If *Opera aperta* [The Open Work] (Eco [1962] 1989) poses the problem of the position to assume in the face of the ambiguity and multiplicity

of interpretations of the work of art and, consequently, of society, *I limiti dell'interpretazione* [The Limits of Interpretation] (Eco [1990] 1991) examines a specular issue, that is the identification of valid criteria in support of arguments against the uncontrolled drift of interpretations, legitimised precisely by technological openness and the multiplication of readers/writers ensured by technology. All such issues are ushered in the contemporary world by the emergence of a public arena in the form of digital media.⁷

The semiotic reflection on gamification also provides much theoretical food for thought for research devoted to the digital world. Umberto Eco had already shown his appreciation of *Homo Ludens*, a fundamental work by the Dutch Medievalist John Huizinga (1938), whose 1973 Italian edition, published by Einaudi, he introduced with a critical essay. In this paper, Eco argues that Huizinga can be considered the father of a strictly structural conception of play, a conception which views play not as a mere *ludus* or pastime focused on the dimension of pleasure but as capable of asserting a social model. According to Eco, Huizinga's modernity – which, not surprisingly, was criticised by the idealistic historians of his time – lay in his putting forth a notion of culture as a set of diverse and yet interconnected social phenomena (sport, law, art etc.), thus going beyond an elitist vision that made this term correspond only to 'high' output, and, at the same time, a certain romantic essentialism seeking to reveal the 'spirit' of a people through its culture. Moreover, his use of the notion of 'cultural invariant' (borrowed from sociology) can be considered highly innovative, identifying play as a profound structure spanning the most disparate thematic areas. In spite of the modernity of his conception, Huizinga does not appear to adequately pursue the mission he has set, according to Eco. Instead, the Dutch historian indulges in general considerations of an aesthetic/moral character that do not fit the need to trace a rigorous morphology of play practices and systems. It is precisely this inability to draw concrete analytical consequences from his epistemological moves that leaves room for a semiotics of play, aimed precisely at bridging the Dutch historian's ambiguities and undertaking to describe these morphological configurations in detail. Eco himself inaugurates such work, proposing a fundamental distinction which escaped Huizinga's observation: that between game and play. This distinction serves precisely to dissolve the ambiguities that the term has, both in Italian – the language in which Eco's introduction was written – and in German – the language of Huizinga's text – thus incorporating the two meanings that in English are lexicalised in two different terms. It is up to the semiologist, then, to clarify the issue, underlining the fundamental difference between the game as an abstract model defined by a system of rules, and play, intended as a game situation liable to be described morphologically, or semiotically.

Indeed, what attracts the interest of the semiotic community is play's peculiarity of offering itself as a system that can shape interactions in disparate areas of sociality, combined with the call for a morphological description of the concrete forms in which it is expressed. And it was Omar Calabrese who took up Eco's baton, following the path of a semiotics of play

aimed at addressing its dual nature of game and play. In this regard, in 1993, Calabrese published a collection of essays with the emblematic title of *Serio ludere*. In the oxymoron of this Latin motto, Calabrese recognises how play can offer an effective modelling of semiotics' stance on the world, combining play and game, or assuming, in reflexive and therefore identity terms, the peculiarities of both references. In other words, as a discipline devoted to the systematic description of sociality, semiotics can be likened to a game: first and foremost, for the fact of carrying out its activity with a playful disposition, linked to the enjoyment and disinterested fun (and not to instrumental gains) of the player in the game situation (play); then, for the fact of combining such a playful disposition with the 'seriousness' of those who consciously choose to carry out the task of a morphological description of the game with the due dedication. Thus, dedication and playfulness go hand in hand. Therefore, according to Calabrese, semiotics can adopt the same playful attitude whether analysing proper games such as bridge (Calabrese 1993: 99–140), television programmes such as *Carosello* (Calabrese 1993: 27–46), trouser fastening zips (Calabrese 1993: 68–70) or Snoopy, the iconic cartoon character born of Schulz's imagination (Calabrese 1993: 47–51). Gianfranco Marrone, many years later, revealed the essential epistemological significance of this approach, ascribing to Calabrese the notion of the *serio ludere* approach, which defines the semiologist as a *professional amateur* (Marrone 2015). If it is true that the path of semiotics as a game can be recognised as a nerve traversing the very evolution of the discipline⁸, the same cannot be said of a semiotics of gaming, which is the field explored by Bartezzaghi⁹ and a few others; however it has garnered focus from a new generation of scholars, also as concerns the digital sector and in particular gamification, urban gamification, and semiotics of videogames (see Maietti 2004; Meneghelli 2007, 2013; Thibault ed. 2016, 2020; Idone Cassone 2020; Biggio et al. eds. 2020).

2. The beginnings

But how exactly did the net as a theme enter the radar of Italian semiotics?

A first line of research seems, to us, oriented at shedding light on the innovative characteristics of the web in comparison to traditional media. A fundamental feature, granting that these studies fall within the disciplinary framework of semiotics, is their inductive approach and analytical character: every general consideration is legitimised by the concrete analysis of the various textualities – websites and artefacts – found online.

To our knowledge, the first work to appear in Italy affirming a semiotic point of view on the theme of the internet and the World Wide Web dates back to 1996. The booklet, published as a supplement to the economics magazine *Espansione* and curated by the *Centro Studi Astra* (1998) in collaboration with *Alphabet*, is entitled *Costruire internet: La prima ricerca semiotica sul World Wide Web per imparare a comunicare attraverso i siti*

[Building the internet: the first semiotic study on the World Wide Web to learn how to communicate through websites]. The approach taken is pedagogical and design-oriented. The research objectives, stated at the opening of the book, immediately clarify that the sociosemiotic analysis¹⁰ of the approximately 80 websites making up the corpus examined will endeavour to determine a set of 'rules' for website design. The same attitude of 'adaptation' of the semiotic gaze to the novelty represented by the internet is found in other, increasingly rigorous and controlled studies on the subject. A good example is the successful volume edited by Isabella Pezzini (2001), *Trailer, spot, clip, siti, banner* [Trailer, commercials, clips, websites, banners]. Already underscored in the introduction is the discipline's difficulty in keeping pace with

contemporary textual panoramas [...] increasingly dense and multiform, difficult to cut out and decipher according to unitary reading strategies (Pezzini ed. 2001: 7, my translation).

Of these textual panoramas, the logic of "infinite germination" is emphasised (which challenges the discipline by undermining the determination – essential for the attribution of meaning to the world – of textual closure¹¹) as well as the incessant re-modelling power of the texts of culture. The volume contains some essays dedicated to the analysis of texts produced for the internet (see, in particular, the essays by Guarino (2001), Polidoro (2001) and Barbieri (2001) contained in it).

The book by Alessandro Zinna (2004), *Le interfacce degli oggetti di scrittura. Teoria del linguaggio e ipertesti* [The interfaces of writing objects. Language theory and hypertexts] can also be ascribed to this pioneering phase. Zinna's work examines the elements of discontinuity of digital interfaces with respect to writing, casting its gaze particularly on the design side and on the interfaces' semiotic characteristics capable of challenging consolidated semiotic models, in view of their adaptation. The volume aspires to the construction of a completely renewed semiotic theory resulting from the encounter with digital hypertexts and the consequent technologisation of the plane of expression.

A common feature of these studies is precisely their advocated approach to the analysis of the diverse textualities arising from the web. Rather than focusing on the rhetoric they embody, these studies emphasise their unique medial specificity, which challenges the classical models of the discipline that primarily analyse individual texts. This shift is driven by the progress marked by the advent and widespread use of hypertext. The latest publication in this line of research is the manual by Giovanna Cosenza (2014) *Introduzione alla semiotica dei nuovi media* [Introduction to the semiotics of New Media] which 'semioticises' some fundamental issues of the debate around the textual specificities of websites and their usability. Cosenza identifies actual 'guidelines' for the analysis of websites to be taken into consideration regardless of the individual narratives conveyed.

3. Stabilisation

The fervour for an epistemological renewal of the discipline stirred by the novelty of the web was exhausted, however, as the web became hegemonic, and reflection on the medial specificities derived from digital media has given way to the analysis of the practices and rhetorics of internet discourse. This has been by far the most productive line of research for Italian (and, perhaps, non-Italian) semiotic studies on the dynamics of the web.

Jean-Marie Floch's foundational study on Apple and IBM (Floch [1995] 2000) opened the discussion around the forms of life that recognise themselves in the use of digital media. The essay establishes a model for the analysis of the visual identities of major brands, beginning with their logo. The logo is no longer considered solely as a symbolically meaningful trace but rather as a text with internal articulation that communicates a specific brand narrative. According to Floch, logos already make it possible to identify the visual identity that characterises the entire communication (advertising, product design, sales points, etc.) of a given brand. As the Apple and IBM logos are analysed, their narrative is revealed, showing how the two brands convey two opposing and competing ideologies on the digital world. This essay on corporate communication offers the first analysis of digital discourse which, considering its role and function in society, will end up being considered as a life form (through company CEOs such as Steve Jobs) by users; indeed, becoming a user of an Apple product means much more than using a tool, it amounts to identifying one's experience, one's way of being online, and more generally, of living. This study initiated a research trajectory on visual identities that, aligned with the notion of identity as the result of competing philosophies, explored the evolution of Apple's strategies within the discourse of information technology. The research expanded to encompass the visual identity (and life form) of Microsoft Windows (Mangiapane 2009a; Polidoro 2009) and extended further to include Google. A dedicated volume on Google's strategies (Del Marco and Pezzini eds. 2017) opens with an analysis of its visual identity (Del Marco 2017: 25–43). Information technology discourse and the ideological assertions of big brands on their role and mission are also the focus of an article dedicated to a well-known Telecom Italia commercial¹² featuring Gandhi (Mangiapane 2009b). The article sets out to deconstruct the advertising campaign's representation of the role of the web in the difference between new and old media, but it is also worth of mention for its account and analysis of the controversy raised by debunker activists such as Paolo Attivissimo¹³ and fuelled by spoofs uploaded to Youtube by users – something which nowadays could be characterised as memetic practice.

The dawn of Web 2.0 caused the focus to shift to community and socialisation dynamics. The first forays into the subject are the works by Giulia Ceriani (2009) inspired by the non-specifically semiotic work of Granieri (2005) and Di Fraia (2007). My own essay dedicated to the urban blog *Rosalio.it* (Mangiapane 2010) and published as part of a project dedicated

to places of socialisation in Palermo (Marrone ed. 2010) represents the first structured analysis of the community dynamics of a medium-sized urban blog. The essay analyses five years in the life of the community orbiting around the blog, framing their interactions, and upholds the notion that blogs are configured as heterotopies which, by establishing an internal autonomous temporality, could also be considered heterochronic, as well as heteroglossic for coining specific jargons within their field of linguistic activity. The essay draws upon Landowski's (1989, 1996) political discourse analysis and for the first time applies its methodology to account for the life of online communities. Still on the subject of blogs and social networks, my own article dedicated to the world of culinary blogs (Mangiapane 2014a) adopts the same approach, delving into group practices such as giveaways and contests periodically announced by blogs.

Times were ripe for semiologists to develop a widespread receptiveness towards the "new forms of socialization" represented by the internet 2.0. *Politics 2.0* edited by Federico Montanari (2010) opened the dances. The slender volume – merely 150 pages – is a collection of essays by the 'old guard' in the fields of semiotics (including Eco and Calabrese) and political studies (Pasquino) who are sceptical towards the optimistic liberation perspectives of a certain rhetoric of new media. Its focus is in fact on the broad anthropological differences marked by the advent of the pervasive political communication of Berlusconi's commercial television and social media (looking at them mostly as worlds in continuity). Eco's contribution (2010) is noteworthy, advocating a semiotics of silence in the face of the noise generated by the incessant chatter filling websites and online communities. In the same vein is a work by Leone (2014) dedicated to digital spirituality, which interprets the spread of communication mediated by digital devices as part of a progressive process of de-materialisation of society with evident repercussions on the religious sphere. However, such critical stance does not seem to fit in with the prevailing attitude of general openness towards the demands of digital communication. This is attested by subsequent scientific production that aims at exploring and mapping out online socialisation practices and often displays an optimistic attitude towards the role of political openness exercised by digital media. *Viaggio nei social network* [A journey through social networks] is the title of a monographic issue of *E/C*, the official journal of the *Italian Association of Semiotic Studies*, edited by Nicola Bigi and Elena Codeluppi (2011) which testifies to the desire to systematically investigate this scenario. The editors' introduction to the volume points to a curious and, so to speak, 'integrated' approach, aimed at highlighting the advantages and opportunities of new communication tools through notions developed by the sociological literature on the web (for example, the concept of contagion and virality); however, these are assumed without adequate critical reflection.¹⁴

Progressively, the community gains a less naive viewpoint, oriented towards an increasingly sophisticated modelling of internet dynamics. Specialist literature on the subject of the web is consolidated. This is, for exam-

ple, the case of Vincenza Del Marco (see at least Del Marco and Pezzini eds. 2017; Del Marco 2018), Riccardo Finocchi (ed. 2016a, 2016b, 2017; Finocchi et al. 2020), Francesco Mangiapane (2009a, 2009b, 2010, 2014a, 2015a, 2015b, 2016, 2018a, 2018b), Paolo Peverini (2012, 2014a, 2014b, 2016a, 2016b, 2017a, 2017b; Finocchi et al. 2020) and Gabriele Marino (2014, 2015, 2016; Thibault and Marino 2018; Marino and Thibault eds. 2016) who directs his attention to memetic dynamics and elaborates on the topic in a monographic issue of *Lexia* (see note 14).

A line of expertise in the semiotic discipline is represented by competent media analysis which, as we have seen, marks a distance from McLuhan's positions and increasingly chooses to focus on the problem of re-writing, translation and re-mediation posed by Bolter and Grusin (1998) (see Marrone 1998; Franci and Nergaard eds. 1999; Dusi and Nergaard eds. 2000; Dusi and Spaziante eds. 2006; Eugeni 2010; Mangiapane 2014b; Migliore ed. 2016a and 2016b; Marrone 2018; Biggio et al. eds. 2020; Giannitrapani and Marrone eds. 2020; Corrain and Vannoni eds. 2021). Another area of interest is photography, whose fate, following the impact of the transition from analogue to digital, is widely explored by the semiotic community (see among others, Dondero 2007; Basso Fossali and Dondero 2008; Brucculeri et al. eds. 2011; Del Marco and Pezzini eds. 2011; Finocchi and Perri 2012; Pozzato 2012; Leone ed. 2018; Mangano 2018).

Generally speaking, the consolidating semiotic gaze on the digital sphere is keen to distance itself from both triumphalistic tones and apocalyptic scenarios. Such an approach can be summed up by Isabella Pezzini's slogan (Del Marco and Pezzini eds. 2017: 7) "neither apocalyptic nor integrated", which, referring to a well-known work by Eco, ([1964] 1994)¹⁵, carefully avoids taking an ideologically favourable or opposed position towards the novelty represented by new media. Contributions as *Corpi medi-ali. semiotica e contemporaneità* [Media bodies. semiotics and contemporaneity] (Pezzini and Spaziante eds. 2014), *Strategie dell'ironia sul web* [Strategies of irony on the web] (Finocchi ed. 2016a), *Nuove forme di interazione: dal web al mobile* [New forms of interaction: from web to mobile] (Pezzini and Spaziante eds. 2014), edited by Guido Ferraro and Anna Maria Lorusso (2016), the monographic issue of the journal *Versus. Quaderni di studi semiotici* dedicated to *Gli schermi dell'apparire* [The screens of appearing] (Finocchi and Pezzini eds. 2017) or *Le forme della persuasione e il sistema dei media* [The forms of persuasion and the media system] (Addis and Prato eds. 2020) put under scrutiny a world that is now inextricably linked to media representation, in which daily life is expressed and reflected through social media practices (Facebook and Instagram in the first place). In this context, the reflection on the political repercussions of the advent of social networks is of great importance, especially with reference to the contamination of the public debate caused by imbecility (see notes 5 and 6), conspiracies and fake news (see Leone ed. 2016b; Lorusso 2018; Polidoro ed. 2018). Noteworthy in this regard is the article on *Doppiozero* by Marrone (2017a) which invites the reader to re-interpret the phenome-

non of fake news according to credibility building strategies and the effects of verisimilitude of the texts circulating in social media. Also worth mentioning is an essay by Mangiapane (2018b) aimed at reconstructing a proper 'fake-news discourse' through the analysis of the intermediary rhetorical strategies of some Facebook pages accused of spreading false news. The attention thus progressively shifts to the reconstruction of emerging political dynamics starting from the pervasiveness of the mediatisation of everyday life induced by social media (see the notion of "social rhetoric" proposed by Mangiapane 2018a). Significant in this regard are the works by Mazzucchelli (2016) and Leone (2016a, 2020b) on the tactics of online conflict, by Peverini on the semiotic measurement of influence and online reputation (2016b) and again on the relationship between everyday life and Instagram (2017b), by Spaziante (2019) about the new forms of influence exercised by Youtubers.

Still in terms of political dynamics, it is worth drawing attention to the series of contributions by Sedda and Demuru (2018a, 2018b, 2019, 2020) dedicated to the forms of media populism. The hypothesis of the two semio-logists is that the emergence of social networks as political arenas represents the lowest common denominator for the new forms of populism. Populist leaders – according to overall considerations developed through progressive generalisations based on the study of Brazilian leader Bolsonaro and the Italian Lega party secretary Salvini's communication strategies – characterise their discourse along at least five axes, namely vagueness, implosion, primacy of the body, esthesia and negativity. Social networks constitute the ideal environment for a characteristically ambiguous discourse, which to the rational construction of a political proposition based on a conscious choice in a system of alternatives (following a paradigmatic order OR/OR) prefers an unmarked logic (AND/AND). Far from avoiding charges of contradiction, this logic tends to blur any contradictory element to the point of making it appear insignificant; its strong point lies precisely in its ability to conciliate opposing demands. Building consensus on vague and mostly contradictory instances, in which everything is muddled, ends up creating an indeterminate collective which, depending on the point of view taken, may now be understood as a sign of the implosion of all possible political organisation or, conversely, as the original nucleus from which a new order may come into being. This would explain the evolution of many populist movements and parties which, after an early stage characterised by ambiguity, once they are integrated in the political system, choose to structure themselves on the basis of more precise and articulated platforms, becoming in some way part of the establishment. The indeterminacy promoted by "social-ist" (a neologism coined by the authors (2018b) to reflect the convergence of populism and social networks' rhetoric) leaders and groups finds a moment of stabilisation in corporeality, anchoring itself on it. It is a euphoria of the "mingling of bodies" which affords particular pleasure in the identification with an unclear vision and perspective of action; thus, the greater the semantic vagueness in terms of contents and politi-

cal propositions, the greater the role of the emotional component and aesthetic involvement, with the result of blurring the boundaries between reality and fiction and between historically separate discursive spheres (public life/private life, politics/football etc.), evoked concurrently. Finally, there is the propensity for negativity. The populist discourse as it is expressed on social networks is intrinsically aggressive, aimed at 'bringing down' opponents rather than proving them wrong; using foul language and an aesthetics of abasement whose goal is to make *tabula rasa* of one's anti-subject, demolishing it completely as the representative of an irreducible otherness and therefore radical and impossible to integrate within a common discourse.

These rhetorical forms emerge from social networks which, according to Sedda and Demuru (2020), literally end up giving shape to new political practices exploited by political leaders through specific interaction tactics, such as disguise (i.e. the idea that leaders can disguise themselves in the clothes of professionals and such recognised roles in society as fire-fighters, police, workers, and so on), posture (that is, poses and attitudes of figures outside the political arena, belonging to the military world or that of entertainment) and mimicry (that of the politician masquerading as a man on the street, the ordinary man). In particular, in adopting this last mimetic strategy political leaders exhibit their 'normality' of existing as subjects with imperfect bodies (as in the case of Italian Lega party secretary Salvini who does not refrain from showing his adipose belly while standing shirtless in front of a barbecue on a day off, in a photograph shared on social networks) or even as vulnerable subjects (as in the case of some photos published by the Brazilian leader Bolsonaro in which he shows his sick body). The daily diet made up of peasant or industrial foods exhibited on social media by both Salvini and Bolsonaro can be attributed to the tactics of mimicry as it has been described above.

Among the works worthy of mention is Marrone's essay (2017b), focussed on an analysis of Facebook interactions in terms of phatic communication. Marrone brings the question of online socialisation back to its anthropological roots founded on 'contact' by reconnecting the links that separate network users from the practices of the 'savages' studied by Malinowski (1923); on the other hand, it suggests a typology to classify interactions on the basis of a tensive pattern that ranks, depending on their degree of transitivity, heterogeneous practices such as exclamation, information, expression and promotion.

Semiotics does not fail to enter the debate on machinic enunciation (see Eugeni 2020; Mazzucchelli 2020), an area also investigated by Paolucci (2020a and 2020b) with the aim of proposing a revision of the theory of enunciation as set out (and received by structural semiotics) by Benveniste. Paolucci suggests recognising the pre-eminence of the *he/she* over the figures of the enunciator and the enunciatee: To be the source of subjectivity, according to Paolucci, is an impersonal instance that expresses itself first of all as a third person (a *he/she* who is both *me* and *not me*) which only

secondarily and under certain conditions is stabilised through the formal apparatus of enunciation in terms of linguistic subjectivity proper.

Another important strand of research focuses on the transformation process of objects from inert 'things' to real multifunctional devices as is the case of Google Home or Alexa (see Marrone 1999, Marrone and Landowski eds. 2002; Mattozzi ed. 2006; Mangano 2008, 2009, 2014, 2018; Polidoro 2009; Finocchi et al. 2020). Opening this new field of scholarly investigation, precisely regarding smart objects Finocchi, Perri and Peverini (2020) note how their progressive diffusion compels the human sciences, and even more so semiotics, to reassess the very notion of identity and delve more usefully into the identification procedures resulting from the interaction of human and non-human actors. Furthermore, this exercise can only lead to a rethinking of the theoretical notions that have guided the reflection on the problems of intersubjectivity and interobjectivity up until now: the idea of the medium as an external prosthesis capable of giving shape to virtual worlds, the dialectic that inextricably links form and function (clearly independent in objects such as Google Home or Alexa) and Latour's notion of hybridisation itself.

4. Specialisation

As we have said, the hegemony of daily life interactions mediated by digital technologies is gradually reducing the cogency of a specialised focus on the specific characteristics of individual platforms, as well as discouraging general stances on social media as a whole. The Italian community thus shows that it has progressively developed an expertise in analysing the texts of shared digital communication. This leads to the specialisation of the analytical gaze whereby the discourse on digital media is developed on the basis of an analyst's competence on a given field of research (fashion, marketing, visuality and so on), of which the specificities of digital communication may be investigated only in the second instance. Titles like *Social moda. Nel segno di influenze, pratiche, discorsi* [Social fashion: influences, practices, discourses] (Terracciano 2017), publications¹⁶ yielded from the ERC FACETS (*Face Aesthetics in Contemporary E-Technological Societies*) a project coordinated by Massimo Leone or from the ERC *Nemosanti* [New Models of Sanctity in Italy] project coordinated by Jenny Ponzio, texts such as *L'immagine in rete. Selfie, social network e motori di ricerca* [Image on the web. Selfie, social networks and search engines] (Del Marco 2018), *I linguaggi dell'immagine. Dalla pittura ai Big Visual Data* [The languages of the image. From painting to Big Visual Data] (Dondero 2020), *Troppo lontani, troppo vicini. Elementi di prossemica virtuale* [Too far, too close. Elements of virtual proxemics] (Fadda 2018), *semiotica e Digital Marketing* [Semiotics and Digital Marketing] (Bianchi and Cosenza eds. 2020) give the measure of how the media from main target of investigation have become a perspective from which to consider specific issues and problems

referred to the intermedial expertise, so to speak, of the particular analyst. It is precisely this intermedial expertise that makes the semiologist effective, thanks to his ability to construe a synthetic discourse capable of recognising common patterns in areas that are ordinarily considered unrelated. Exemplary in this regard is Anna Maria Lorusso's approach to the question of post-truth mentioned above (Lorusso 2018). While public debate around the problem of fake news immediately accuses some media platforms (social networks and in particular Facebook), the work of the semiologist shows how the vanishing of enunciative and philological responsibility towards public assertions, far from being a prerogative of the web, could be ascribed to a compromised media system encompassing bad television and bad journalism.

Thus, we are increasingly witnessing the progressive disappearance of any explicit reference to the digital or analogue nature of a certain body of analysis or field of reflection as a decisive factor. This development, rather than pointing to a declining interest of the semiotic community in the digital world, is a sign of the latter's pervasiveness, as if to state the impossibility of a semiotic gaze on the contemporary that does not focus – intentionally studying them or taking into account their peculiarities – on digital media texts.

Notes

- 1 We use this generic term deliberately, referring to the countless occasions determined by interviews and opinions expressed in journalistic articles, television broadcasts, events and festivals or even through editorial projects, in which semiologists were called upon as recognised 'experts' even in the absence of a sufficient quantity of studies and in-depth analyses capable of guaranteeing a solid 'disciplinary' position on the subject addressed. The most notable case is that of Umberto Eco, who already in 1992 launched the *Encyclomedia* digital project in collaboration with Danco Singer and in 1996, again with Danco Singer and Gianni Riotta, founded one of the first large-scale online cultural magazines, *Golem – L'indispensabile*. Moreover, on several occasions Eco also expressed his views on the survival of the book as a cultural artefact in the age of computers (see, for example, Schelma 1991). Similar considerations could be made with regard to Calabrese, who, particularly in his *L'età neobarocca* [The Neo-Baroque Age] (1987 now in Calabrese 2013), provides a general epistemological framework for 'reading' the social in the face of the turning point of electrical and digital media (see in particular pp. 135–136, dedicated to video games). Fabbri too intervenes on the subject while it is still a work in progress, so to speak. During a *Rai* television broadcast in 1998, for example, he commented with the students of the DAMS Department of the University of Bologna on the perspectives opened up by the diffusion of new media (the interview was recently transcribed and published in Fabbri 2017: 23–27).
- 2 The constant solicitation by the students of communication sciences degree courses, established at the behest of Umberto Eco himself, acts as a spur to the semio-

tic production on the subject. These courses were activated in 1992, or at the dawn of the advent of digital media. The great success of the new degree course 'forces' the semiotic community to follow in real time, so to speak, the ongoing media turn, to which lectures, seminars, degree and doctoral theses will be dedicated.

- 3 A remarkable research output is the anthology of works from science and technology studies entitled *Il senso degli oggetti tecnici* [the meaning of technical objects], edited by Alvise Mattozzi (ed. 2006) and significantly included in the *Signature* series directed by Paolo Fabbri and Gianfranco Marrone for the publisher Meltemi.
- 4 It is above all in the first works that the contours and specificities of Latour's sociology of science approach can be appraised (see, for example, 1979, 1987, 1996, 1999a). Returning the attention that Bruno Latour has reserved for semiotic studies and the work of Paolo Fabbri in particular (see Latour 2016), the semiotic community has shown a keen interest in his theories by drawing upon, publishing, and translating some of his works. In Italy, Latour's 1992 work was published and discussed in Mattozzi ed. 2006, Latour 1999b was published and discussed in Fabbri and Marrone eds. 2001, and he also produced works in 2009 and 2021. The semiotic community has also produced a string of reviews, including Mangano and Mattozzi 2009, Mangano 2010, Marrone 2011b, Peverini 2019, and Paolucci 2020b.
- .5 The question was already posed in 2012 by Weinberger (2012: 8–15, Italian translation) and re-launched by Eco himself, in the famous polemic against the imbeciles of the net (see note 6). The crisis of expertise, in the relationship with the spread of social media, has been at the centre of semiotic reflection for some time, cf. Marrone 2013a, 2013b, 2015 and Marrone and Migliore eds. 2021.
- 6 On the central theme of stupidity there are various contributions from Italian semiotics, among which Marrone (2012) stands out. The relationship between social networks and stupidity was discussed by Eco (as summarised by Mangiapane 2015b) and Bartezzaghi (2019).
- 7 For a recent discussion on the "limits of digital interpretation" see Leone (2020a).
- 8 I first attempted an assessment of the playful disposition of the discipline (Mangiapane 2020: 165–168). For a historical perspective, see the seminar of the Cisel of Urbino, *Il linguaggio del gioco* [The language of play], held on October 25–27, 1975; the AISS conference dedicated to *Il gioco: segni e strategie* [The game: signs and strategies] whose proceedings have been published, edited by Perissinotto, 1997. On the practices of design as a game, see Zingale 2009. On the game of football and its ties with the Italian and Brazilian identity and culture, see Demuru 2014.
- 9 Stefano Bartezzaghi dedicates much of his essayist activity to the analysis of games, cf. among others, Bartezzaghi 1992, 1995, 1998, 2001, 2004, 2007, 2010, 2012, 2017. Many of his works directly focus on the internet and social networks, see Bartezzaghi 2013, 2016, 2019.
- 10 Let it be clear that this is a naïve approach, mostly oriented to the semiotics of Jakobsonian codes and functions, blandly touching upon the issue of Greimasian analysis, not without methodological errors (utopian and mythical valorisation are confused) and inaccuracies.
- 11 We noted above how the problem of disentangling the textual ambiguity of contemporary texts, between openness (Eco 1962) and the limits of interpretation (Eco 1990), represents a skill and a specialisation that semiotics has claimed since its

beginnings and through Eco's words, and distinguishes it from classic aesthetic theory. On the other hand, the problem is theoretically framed in Greimasian theory (see Greimas and Courtés [1979] 1983, entry: closure, *ad vocem*) which notes how each articulation of a semantic universe presents itself as the realisation of a relatively small number of possibilities; thus, the semantic scheme underpinning a text can be considered open, while its realisation is closed in the concrete use that is made of it. Then there is the problem of genres which allows the recognition of classes of discourses characterised by the same structure (for example, Russian folktales can be identified by foreseeing the re-establishment of the initial axiological state at the end). There is still the canonical narrative scheme which, articulating every possible story in stages, postulates a closure (sanction) as a condition of every opening. And finally, the interpretative activity of the enunciator who chooses to mark the boundaries of the text on the basis of his own ideological objectives, with reference to a particular reading of the text – which includes some parts and excludes others – or of a momentary interruption in the act of reading that permits a provisional closure. It is worth mentioning Marrone's viewpoint (2011a: 8–9): “of the text, everything is negotiated, beginning with its spatial or temporal, physical or semantic boundaries”. Such a position allows the ‘open’ texts (hyper-texts) of digital communication to be subjected to critical scrutiny, and places, among the objectives of the analysis, the reconstruction of the negotiation dynamics between enunciator and enunciatee regarding the textual boundaries to be assigned to their interactions.

- 12 This is an impressive 2004 advertising campaign, commissioned by Telecom Italia to Oscar-winning director Spike Lee, and starring the late political-religious leader Gandhi thanks to the use of special effects and editing. Speaking via the internet with new age music in the background, he exhorts all of humanity to peace and universal love. Gandhi's performance is followed by a text in white letters on a black background that asks, rhetorically: “if he could have communicated like this, what would the world be like today?”; then the Telecom Italia logo appears in the closing frame. The commercial can be watched on Youtube. URL: <https://www.youtube.com/watch?v=UE03ULLVPoI> [last accessed on July 20, 2021].
- 13 Paolo Attivissimo is the most famous Italian digital debunker. He began his career writing books and manuals teaching the use the most popular software and applications, and since the end of the 1990s he has built a reputation as an expert ‘scam buster’, a debunker of the many scams and frauds circulating on the internet. His blog, *Il disinformatico* (still active: <https://attivissimo.blogspot.com> [consulted on July 20, 2021]) quickly gained popularity. Attivissimo did not take long to reconfigure his identity of ‘scam catcher’ into that of a debunker of conspiracy theories such as those surrounding the landing on the Moon or the September 11 attacks, up until the diatribe on fake news and disinformation on social networks.
- 14 These concepts were harshly criticised by Jenkins et al. eds. (2013: 25–28) and by the community of semiologists itself, led by Fabbri who on several occasions works against the transfer of the logic of contagion from the hard sciences to the humanities (see Marrone 2013b; Fabbri 2020). Around the concept of virality, a fundamental *Lexia* volume was published in 2016 (edited by Gabriele Marino and Mattia Thibault) which deals with the issue from an epistemological, theoretical,

and analytical point of view. While maintaining the centrality of the concept of virality, the volume strongly criticises it (see the essays by Volli, Manini and Damone contained in it), denouncing its inadequacy and, on the other hand, broadens its reach by reinterpreting viral practices and memetics in terms of spreadability.

- 15 An article by Giovanna Cosenza (2016) also heeds the same warning, in addition to my own works mentioned above (Mangiapane 2010, 2014a). Furthermore, a dossier published by *Derive e Approdi*, edited by Anna Maria Lorusso (ed. 2015), dedicated to the 50 year anniversary of the publication of *Apocalypse Postponed*, on which see my own essay entitled *Apocalyptic Web and Integrated Social Networks* (Mangiapane 2015b).
- 16 The publications related to the FACTES project are listed on the web page <http://www.facets-erc.eu/publications/>, those related to the Nemosancti project on the web page <https://nemosancti.eu/publications/>. Both links were accessed on July 21, 2021.

Bibliography

- Addis, Maria Cristina and Alessandro Prato (eds.) (2020). *Le forme della persuasione e il sistema dei media*. Pisa: ETS.
- Barbieri, Daniele (2001). L'argomentare sottile di yugop.com. In: Isabella Pezzini (ed.) (2001). *Trailer, spot, clip, siti, banner*. Milan: Meltemi, 207–226.
- Bartezzaghi, Stefano (1992). *Accavallavacca. Inventario di parole da gioco*. Milan: Bompiani.
- Bartezzaghi, Stefano (1995). *Anno Sabbatico. Lunario delle parole in gioco. [Lapsus, segreti, bisticci, enigmi, scambi di lettere, scambi di persona]*. Milan: Bompiani.
- Bartezzaghi, Stefano (1998). *Sfiga all'OK Corral. Il grande gioco dei titoli*. Turin: Einaudi.
- Bartezzaghi, Stefano (2001). *Lezioni di enigmistica*. Turin: Einaudi.
- Bartezzaghi, Stefano (2004). *Incontri con la Sfinge. Nuove lezioni di enigmistica*. Turin: Einaudi.
- Bartezzaghi, Stefano (2007). *L'orizzonte verticale. Invenzione e storia del cruciverba*. Turin: Einaudi.
- Bartezzaghi, Stefano (2010). *Scrittori giocatori*. Turin: Einaudi.
- Bartezzaghi, Stefano (2012). *Dando buca a Godot. Giochi insonni di personaggi in cerca di aurora*. Turin: Einaudi.
- Bartezzaghi, Stefano (2013). *Il falò delle novità. La creatività al tempo dei cellulari intelligenti*. Turin: Utet.
- Bartezzaghi, Stefano (2016). *La ludoteca di Babele. Dal dado ai social network: a che gioco stiamo giocando?* Turin: Utet.
- Bartezzaghi, Stefano (2017). *Parole in gioco: per una semiotica del gioco linguistico*. Milan: Bompiani.
- Bartezzaghi, Stefano (2019). *Banalità: Luoghi comuni, semiotica, social network*. Milan: Bompiani.
- Basso Fossali, Pierluigi and Maria Giulia Dondero (2008). *Semiotica della fotografia. Investigazioni teoriche e pratiche d'analisi*. Firenze: Guarraldi.

- Bianchi, Cinzia and Giovanna Cosenza (eds.) (2020). *Semiotica e Digital Marketing – Semiotics and Digital Marketing*, monographic issue of *Lexia* 33–34.
- Biggio, Federico, Victoria Dos Santos and Gianmarco Giuliana (eds.) (2020). *Meaning-Making in Extended Reality. Senso e Virtualità*. Rome: Aracne.
- Bigi, Nicola and Elena Codeluppi (eds.) (2011). *Viaggio nei social network*, monographic issue of *E/C* 9.
- Bolter, Jay David and Richard Grusin (1998). *Remediation: Understanding New Media*. Cambridge, MA: MIT Press.
- Brucclerli, Maria Claudia, Dario Mangano and Ilaria Ventura (eds.) (2011). *La fotografia. Oggetto teorico e pratica sociale. Actes of the XXXVIII Conference of AISS – Laboratories*. Rome: Nuova Cultura.
- Burgio, Valeria (2021a). The efficacy of scientific diagrams during the COVID-19 pandemic: processes of visual translation and dynamics of online diffusion. *Vcs. Visual Culture Studies* 2, 115–141.
- Burgio, Valeria (2021b). *Rumore visivo. semiotica e critica dell'infografica*. Milan: Mimesis.
- Calabrese, Omar (1987). *L'età neobarocca*. Rome and Bari: Laterza. Now: *Il neobarocco: Forma e dinamiche della cultura contemporanea*. Firenze: La casa Usher 2013, 49–214.
- Calabrese, Omar (1993). *Serio ludere: (sette serissimi scherzi semiotici)*. Palermo: Flacovio.
- Centro Studi Astra and Alphabet (1998). *Costruire internet: La prima ricerca semiotica sul World Wide Web per imparare a comunicare attraverso i siti*. Supplement of *Espansione* 4, April.
- Ceriani, Giulia (2009). Vite chiacchierate: weblog, identità e giovanissime età. In: Elena Gilliberti (ed.). *Finzioni autobiografiche*. Urbino: Quattroventi, 179–191.
- Corrain, Lucia and Mirco Vannoni (eds.) (2021). *Figure dell'immersività. Carte semiotiche* 7.
- Cosenza, Giovanna (2014). *Introduzione alla semiotica dei nuovi media*. Rome and Bari: Laterza.
- Cosenza, Giovanna (2016). Il “popolo del web”, fra apocalittici e integrati, determinismo e antideterminismo tecnologico. In: Guido Ferraro and Anna Maria Lorusso (eds.). *Nuove forme d'interazione: dal web al mobile*. Tricase, LE: Libellula, 31–51.
- De Kerckhove, Derrick (1995). *The Skin of Culture. Investigating the New Electronic Reality*. Toronto: Somerville House.
- De Kerckhove, Derrick (1997). *Connected Intelligence. The Arrival of the Web Society*. Toronto: Somerville House.
- Del Marco, Vincenza (2017). Da Google a Alphabet. Strategie e prospettive. In: Vincenza Del Marco and Isabell Pezzini (eds.). *Nella rete di Google: Pratiche, strategie e dispositivi del motore di ricerca che ha cambiato la nostra vita*. Milan: FrancoAngeli, 25–43.
- Del Marco, Vincenza (2018). *L'immagine in rete: Selfie, social network e motori di ricerca*. Rome: Nuova cultura.
- Del Marco, Vincenza and Isabella Pezzini (eds.) (2011). *La fotografia. Oggetto teorico e pratica sociale. Actes of the XXXVIII Conference of AISS*. Rome: Nuova cultura.

- Del Marco, Vincenzo and Isabella Pezzini (eds.) (2017). *Nella rete di Google: Pratiche, strategie e dispositivi del motore di ricerca che ha cambiato la nostra vita*. Milan: FrancoAngeli.
- Demuru, Paolo (2014). *Essere in gioco. Calcio e cultura tra Brasile e Italia*. Bologna: Bononia University Press.
- Di Fraia, Guido (2007). *Blog-grafie. Identità narrative in rete*. Milan: Guerini e Associati.
- Dondero, Maria Giulia (2007). *Fotografare il sacro. Indagini semiotiche*. Rome: Meltemi.
- Dondero, Maria Giulia (2020). *The Language of Images: The Forms and the Forces*. Berlin: Springer. Italian translation by Enzo D'Armenio: *I linguaggi dell'immagine: Dalla pittura ai Big Visual Data*. Milan: Meltemi.
- Dusi, Nicola and Siri Nergaard (eds.) (2000). *Sulla traduzione intersemiotica*, monographic issue of *Versus. Quaderni di studi semiotici* 85–86–87.
- Dusi, Nicola and Lucio Spaziant (eds.) (2006). *Remix-Remake: Pratiche di replicabilità*. Milan: Meltemi.
- Eco, Umberto (1962). *Opera aperta*. Milan: Bompiani. English translation by Anna Canocogni: *The Open Work*. Cambridge, MA: Harvard University Press 1989.
- Eco, Umberto (1964). *Apocalittici e integrati*. Milan: Bompiani. English translation by Alastair McEwen: *Apocalypse Postponed: Essays by Umberto Eco*. Bloomington, IN and London: Indiana University Press 1994.
- Eco, Umberto (1973). *Homo ludens*. Now in: John Huizinga (eds.) (1973). *Homo Ludens*. Turin: Giulio Einaudo, VII–XXXII.
- Eco, Umberto (1975). *Trattato di semiotica Generale*. Milan: Bompiani. Rewritten by the author in English as: *A Theory of semiotics*. Bloomington, IN: Indiana University Press 1976.
- Eco, Umberto (1990). *I limiti dell'interpretazione*. Milan: Bompiani. English translation by Stefan Collini: *The Limits of Interpretation*. Bloomington, IN and London: Indiana University Press 1991.
- Eco, Umberto (2007). *Dall'albero al labirinto: Studi storici sul segno e l'interpretazione*. Milan: Bompiani.
- Eco, Umberto (2010). Per una semiotica del silenzio. In: Federico Montanari (ed.). *Politica 2.0: nuove tecnologie e nuove forme di comunicazione*. Rome: Carocci, 17–22.
- Eugeni, Ruggero (2010). *Semiotica dei media: le forme dell'esperienza*. Rome: Carocci.
- Eugeni, Ruggero (2020). Far sentire la macchina. Appunti sulla soggettiva cinematografica e la teoria dell'enunciazione. In: Maria Cristina Addis and Stefano Jacoviello (eds.). *Tra il dire e il fare. Enunciazione: l'immagine e altre forme semiotiche*, monographic issue of *E/C* 30, 134–144.
- Fabbri, Paolo (1973). Le comunicazioni di massa in Italia: sguardo semiotico e malocchio della sociologia. *Versus. Quaderni di studi semiotici* 5, 4. Now in: Paolo Fabbri (2017). *Le comunicazioni di massa in Italia: sguardo semiotico e malocchio della sociologia*. Bologna: Sossella, 57–122.
- Fabbri, Paolo (1998). *La svolta semiotica: Lezioni Italiane Fondazione Sigma-Tau*. Rome and Bari: Laterza.
- Fabbri, Paolo (2017). *L'efficacia semiotica: Risposte e repliche*. Milan: Mimesis.
- Fabbri, Paolo (2020). Epide(se)mologie e contagi: Dialogo con Paolo Fabbri a cura di Federico Montanari. *Ocula* 3. URL: https://www.ocula.it/files/OCULA-Documenti-MONTANARI-Ocula-doc-epidesemologie_e_contagi.pdf [retrieved July 20, 2021].

- Fabbri, Paolo and Gianfranco Marrone (eds.) (2001). *Semiotica in nuce. Volume II. Teoria del discorso*. Rome: Meltemi.
- Fadda, Emanuele (2018). *Troppo lontani, troppo vicini. Elementi di prossemica virtuale*. Macerata: Quodlibet.
- Ferraro, Guido and Anna Maria Lorusso (eds.) (2016). *Nuove forme d'interazione: dal web al mobile*. Tricase, LE: Libellula.
- Finocchi, Riccardo (ed.) (2016a). *Strategie dell'ironia sul web. Carte semiotiche 7*.
- Finocchi, Riccardo (2016b). *Ipermedia e locative media: cronologia, semiotica, estetica*. Rome: Nuova Cultura.
- Finocchi, Riccardo (2017). Forme di vita e immaginazione digitale. Un approccio semiotico/estetico. *Versus. Quaderni di studi semiotici* 46, 2, 249–272.
- Finocchi, Riccardo and Antonio Perri (2012). *No Reflex. semiotica ed estetica della fotografia digitale*. Rome: Graphofeel.
- Finocchi, Riccardo, Antonio Perri and Paolo Peverini (2020). Smart objects in daily life: Tackling the rise of new life forms in a semiotic perspective. *semiotica* 236–237, 141–166. URL: <https://doi.org/10.1515/sem-2019-0020> [retrieved July 20, 2021].
- Finocchi, Riccardo and Isabella Pezzini (eds.) (2017). *Versus. Quaderni di studi semiotici*. 2, 2017.
- Floch, Jean-Marie (1995). *Identités visuelles*. Paris: PUF. English translation by Pierre van Osselaer and Alec McHoul: *Visual Identities*. London: Bloomsbury Academic 2000.
- Franci, Giovanna and Siri Nergaard (eds.) (1999) *La traduzione*, monographic issue of *Versus. Quaderni di studi semiotici* 82.
- Giannitrapani, Alice and Gianfranco Marrone (eds.) (2020). *Forme della serialità. Oggi e ieri*. Palermo: Museo Pasqualino.
- Granieri, Giuseppe (2005). *Blog generation*. Rome and Bari: Laterza.
- Granieri, Giuseppe (2006). *La società digitale*. Rome and Bari: Laterza.
- Granieri, Giuseppe (2009). *Umanità Accresciuta*. Rome and Bari: Laterza.
- Greimas, Algirdas Julien and Joseph Courtés (1979). *Sémiotique. Dictionnaire raisonné de la théorie du langage*. Paris: Hachette. English translation by Larry Christ, Daniel Patte, James Lee, Edward McMahonII, Gary Phillips and Michael Rengstorf: *Semiotics and Language: An Analytical Dictionary*. Bloomington, IN and London: Indiana University Press 1983.
- Guarino, Paolo (2001). Politica in breve. In: Isabella Pezzini (ed.). *Trailer, spot, clip, siti, banner*. Milan: Meltemi, 147–174.
- Huizinga, Johan (1938). *Homo Ludens: Proeve eener bepaling van het spel-element der cultuur*. Haarlem: Willink. Italian translation by Corinna Von Schendel: *Homo ludens*. Turin: Einaudi 1973.
- Idone Cassone, Vincenzo (2020). Secret Games, Puzzle Narratives and Playful Decrypting: gamified narratives in contemporary media. *Versus. Quaderni di studi semiotici* 130, 1, 105–120.
- Jenkins Henry, Ford Sam and Joshua Green (eds.) (2013). *Spreadable Media: Creating Value and Meaning in a Networked Culture*. New York and London: New York University Press.
- Landowski, Eric (1989). *La société réfléchie: Essais de socio-sémiotique*. Paris: Seuil.
- Landowski, Eric (1996). *Présence de l'autre: Essais de socio-sémiotique II*. Paris: PUF.

- Latour, Bruno (1979). *The Social Construction of Scientific Facts*. Beverly Hills, LA: Sage Publications.
- Latour, Bruno (1987). *Science in action: how to follow scientists and engineers through society*. Cambridge, MA: Harvard University Press.
- Latour, Bruno (1992). Where Are the Missing Masses? The Sociology of Few Mundane Artifacts. In: Wiebe E. Bijker and John Law (eds.). *Shaping Technology / Building Society*. Cambridge, MA: MIT Press, 225–258. Italian translation by Michela Nacci: Dove sono le masse mancanti? Sociologia di alcuni oggetti di uso comune. In: Alvise Mattozzi (ed.). *Il senso degli oggetti tecnici*. Rome: Meltemi, 81–124.
- Latour, Bruno (1996). *Petite réflexion sur le culte moderne des dieux faitiches*. Paris: Les empêcheurs de penser en rond.
- Latour, Bruno (1999a). *Politiques de la nature. Comment faire entrer les sciences en démocratie*. Paris: La Découverte.
- Latour, Bruno (1999b). Piccola filosofia dell'enunciazione. In: Pierluggi Basso and Lucia Corrain (eds.). *Eloquio del senso. Dialoghi semiotici per Paolo Fabbri*. Genova: Costa e Nolan, 71–93. Now in: *Documenti di Lavoro 8. Urbino, Centro Internazionale di Scienze semiotiche*. Rome: Aracne 2017, 9–24.
- Latour, Bruno (2009). Un Prometeo cauto? Primi passi verso una filosofia del design. *Il discorso del design*, monographic issue of *E/C* 3–4, 123–130.
- Latour, Bruno (2016). Life among conceptual characters. *Latour and the Humanities*. Special Issue of *New Literary History: a journal of theory and interpretation* 47, 2, 463–476.
- Latour, Bruno (2021). *Politiche del design. semiotica degli artefatti e forme della socialità*. Milan: Mimesis.
- Leone, Massimo (2014). *Spiritualità digitale. Il senso religioso nell'era della smaterializzazione*. Milan: Mimesis.
- Leone, Massimo (2016a). Il bastian contrario nella rete. Pattern rituali di formazione dell'opinione nella semiosfera dei social networks. *Viralità*, monographic issue of *Lexia* 25–26, 173–210.
- Leone, Massimo (ed.) (2016b). *Complotto / Conspiracy*, monographic issue of *Lexia* 23–24.
- Leone, Massimo (ed.) (2018). Semiotics of the Selfie. The Glorification of the Present. *Punctum* 4, 2, 33–48.
- Leone, Massimo (2020a). The Limits of Digital Interpretation. *International Journal for the semiotics of Law* 33, 969–982.
- Leone, Massimo (2020b). Il linguaggio del trolling. Ingredienti semiotici, cause socio-culturali ed effetti pragmatici. *Language and emotions*, monographic issue of *RIFL. Rivista italiana di filosofia del linguaggio*, 147–156.
- Lorusso, Anna Maria (ed.) (2015). *50 anni dopo Apocalittici e integrati di Umberto Eco*. Rome: DeriveApprodi.
- Lorusso, Anna Maria (2018). *Postverità: Fra reality tv, social media e storytelling*. Rome and Bari: Laterza.
- Maietti, Massimo (2004). *Semiotica dei videogiochi*. Milan: Unicopli.
- Malinowski, Bronislaw (1923). The problem of meaning in primitive languages. In: Charles Kay Ogden and Ivor Armstrong Richards. *The Meaning of meaning*. London: Routledge, 296–336.

- Manchia, Valentina (2020). *Il discorso dei dati. Note semiotiche sulla visualizzazione delle informazioni*. Milan: FrancoAngeli.
- Mangano, Dario (2008). *semiotica e design*. Rome: Carocci.
- Mangano, Dario (2009). I-Pod, and you? *Il discorso del design*, monographic issue of *E/C* 3–4, 9–28.
- Mangano, Dario (2010). Politiche della natura. Il caso Mondello. *E/C* 29, March.
- Mangano, Dario (2014). *Che cos'è il food design*. Rome: Carocci.
- Mangano, Dario (2018). *Che cos'è la semiotica della fotografia*. Rome: Carocci.
- Mangano, Dario and Alvise Mattozzi (2009). Talking about design with Bruno Latour. An interview by Dario Mangano e Alvise Mattozzi. *E/C* 11, February.
- Mangiapane, Francesco (2009a). Apple, Ibm e Microsoft in una guerra di segni. *Il discorso del design*, monographic issue of *E/C* 3–4, 123–130.
- Mangiapane, Francesco (2009b). Io sono Gandhi, io sono Telecom. Attorno a uno spot istituzionale di Telecom Italia. In: Elena Giliberti. *Finzioni autobiografiche*. Urbino: Quattroventi, 179–191.
- Mangiapane, Francesco (2010). La città sul web: Il caso dell' urban blog Rosalio. In: Gianfranco Marrone (ed.). *Palermo. Ipotesi di semiotica Urbana*. Rome: Carocci, 259–285.
- Mangiapane, Francesco (2014a). Pratiche culinarie nelle maglie della rete. Blog e contest gastronomici. In: Gianfranco Marrone (ed.). *Buono da pensare: Cultura e comunicazione del gusto*. Rome: Carocci, 167–198.
- Mangiapane, Francesco (2014b). *Peppa Pig*. Milan: Doppiozero.
- Mangiapane, Francesco (2015a). Web apocalittici e social integrati. In: Anna Maria Lorusso (ed.). *50 anni dopo Apocalittici e integrati di Umberto Eco*. Rome: Derive-Approdi, 121–123.
- Mangiapane, Francesco (2015b). Eco e gli imbecilli. *Doppiozero* 26 June. URL: <https://www.doppiozero.com/materiali/ovvioottuso/eco-e-gli-imbecilli> [retrieved July 20, 2021].
- Mangiapane, Francesco (2016). Dalla bacheca di Facebook alla città. Il primo atto della campagna contro una mostra di Hermann Nitsch a Palermo. In: Guido Ferraro and Lorusso (eds.). *Nuove forme d'interazione: dal web al mobile*. Tricase, LE: Libellula, 141–158.
- Mangiapane, Francesco (2018a). *Retoriche Social. Nuove politiche della vita quotidiana*. Palermo: Museo Pasqualino.
- Mangiapane, Francesco (2018b). The Discourse of Fake News in Italy. A Comparative Analysis. Post-Truth and Fake News. *Versus. Quaderni di studi semiotici* 127, 291–306.
- Mangiapane, Francesco (2020). *Cuccioli. Critica dei cartoni animati*. Milan: Meltemi.
- Marino, Gabriele (2014). *Keep calm and Do the Harlem Shake*: meme, internet meme e meme musicali. In: Isabella Pezzini and Lucio Spaziantie (eds.). *Corpi mediali: semiotica e contemporaneità*. Pisa: ETS, 85–105.
- Marino, Gabriele (2015). semiotics of Spreadability: A Systematic Approach to internet Memes and Virality. *Punctum* I, 1, 43–66.
- Marino, Gabriele (2016). Testualità online e ludicità scomponibile: dalla viralità alle pratiche memetiche. *Annali of Carte semiotiche* 3, 100–117.

- Marino, Gabriele and Mattia Thibault (eds.) (2016). *Viralità*, monographic issue of *Lexia* 25–26.
- Marrone, Gianfranco (1998). *Identità visiva e traduzione*. In: Guido Ferraro (ed.). *L'emporio dei segni*. Milan: Meltemi, 123–165.
- Marrone, Gianfranco (1999). *C'era una volta il telefonino*. Milan: Meltemi.
- Marrone, Gianfranco (ed.) (2010). *Palermo. Ipotesi di semiotica Urbana*. Rome: Carocci.
- Marrone, Gianfranco (2011a). *Introduzione alla semiotica del testo*. Rome and Bari: Laterza.
- Marrone, Gianfranco (2011b). *Addio alla natura*. Milan: Einaudi.
- Marrone, Gianfranco (2012). *Stupidità*. Milan: Bompiani.
- Marrone, Gianfranco (2013a). Ignoranti istruiti e dilettanti per professione. *Doppiozero* 11 September. URL: <https://www.doppiozero.com/materiali/chefare/ignoranti-istruiti-e-dilettanti-professione> [retrieved July 20, 2021].
- Marrone, Gianfranco (2013b). Conversazione con Paolo Fabbri: Maestri, guru, ingegneri. *Doppiozero*, 4 July. URL: <https://www.doppiozero.com/materiali/conversazione-con-paolo-fabbri> [retrieved July 20, 2021].
- Marrone, Gianfranco (2015). *Dilettante per professione*. Palermo: Torri del vento.
- Marrone, Gianfranco (2017a). Post-verità. La fine della verità o la verità nei post?. *Doppiozero*, 9 January. URL: <https://www.doppiozero.com/materiali/post-verita-la-fine-della-verita-o-la-verita-nei-post> [retrieved July 20, 2021].
- Marrone, Gianfranco (2017b). *Social network e comunicazione fatica*, monographic issue of *Versus. Quaderni di studi semiotici* 46, 2, 249–272.
- Marrone, Gianfranco (2018). *Storia di Montalbano*. Palermo: Museo Pasqualino.
- Marrone, Gianfranco and Eric Landowski (eds.) (2002). *La società degli oggetti. Problemi di interoggettività*. Rome: Meltemi.
- Marrone, Gianfranco and Tiziana Migliore (eds.) (2021). *La competenza esperta: Tipologie e trasmissione*. Milan: Meltemi.
- Mattozzi, Alvisè (ed.) (2006). *Il senso degli oggetti tecnici*. Rome: Meltemi.
- Mazzucchelli, Francesco (2016). Flamewar, shitstorm e altre catastrofi: Litigare ai tempi del social web. In: Guido Ferraro and Anna Maria Lorusso (eds.). *Nuove forme d'interazione: dal web al mobile*. Tricase, LE: Libellula, 117–139.
- Mazzucchelli, Francesco (2020). Sguardi artificiali. Strategie di enunciazione della visione macchinica. In: Maria Cristina Addis and Stefano Jacoviello (eds.) (2020). *Tra il dire e il fare. Enunciazione: l'immagine e altre forme semiotiche*, monographic issue of *E/C* 30, 123–134.
- McLuhan, Marshall (1964). *Understanding Media: The Extensions of Man*. New York: McGraw-Hill.
- Meneghelli, Agata (2007). *Dentro lo schermo. Immersione e interattività nei god games*. Milan: Unicopli.
- Meneghelli, Agata (2013). *Time out. Come i videogiochi distorcono il tempo*. Limena, PD: Libreriauniversitaria.it.
- Migliore, Tiziana (ed.) (2016a). *Rimediazioni. Immagini interattive 1*. Rome: Aracne.
- Migliore, Tiziana (ed.) (2016b). *Rimediazioni. Immagini interattive 2*. Rome: Aracne.
- Montanari, Federico (2010). *Politica 2.0: nuove tecnologie e nuove forme di comunicazione*. Rome: Carocci.

- Paolucci, Claudio (2020a). Una percezione macchinica: realtà virtuale e realtà aumentata tra simulacri e protesi dell'enunciazione. In: Federico Biggio, Victoria Dos Santos and Gianmarco Giuliani (eds.). *Meaning-Making in Extended Reality. Senso e Virtualità*. Rome: Aracne, 43–62.
- Paolucci, Claudio (2020b). *Persona. Soggettività nel linguaggio e semiotica dell'enunciazione*. Milan: Bompiani.
- Perissinotto, Alessandro (ed.) (1997). *Il gioco: segni e strategie*. Turin: Scriptorium (Paravia).
- Peverini, Paolo (2012). *Youtube e la creatività giovanile. Nuove forme dell'audiovisivo*. Assisi: Cittadella.
- Peverini, Paolo (2014a). Reputazione e influenza nei social media. Una prospettiva sociosemiotica. In: Isabella Pezzini and Lucio Spaziant (eds.). *Corpi mediali: semiotica e contemporaneità*. Pisa: ETS, 65–83.
- Peverini, Paolo (2014b) Urban storytelling ed estetiche del quotidiano. Gli hashtag come parole chiave del sentire comune. In: Ana Claudia de Oliveira (ed.) *Do sensível ao inteligível. Duas décadas de construção do sentido*. São Paulo: OJM Casa editorial.
- Peverini, Paolo (2016a). Brand reputation e parodia. Strategie di subvertising nel social web. *Annali of Carte semiotiche* 3, 149–160.
- Peverini, Paolo (2016b). *Influenza on line e word of mouth. Il ruolo della semiotica nello scenario delle metodologie di analisi*. In: Guido Ferraro and Anna Maria Lorusso (eds.). *Nuove forme d'interazione: dal web al mobile*. Tricase, LE: Libellula, 203–223.
- Peverini, Paolo (2017a). Storytelling e 'viralità'. La comunicazione non convenzionale di marketing nella prospettiva semiotica. *Lexia* 25–26, 417–439.
- Peverini, Paolo (2017b). Daily life in the Instagram Age. A Socio-semiotic Perspective. *Versus. Quaderni di studi semiotici* 125, 285–301.
- Peverini, Paolo (2019). *Alla ricerca del senso. Bruno Latour in dialogo con la semiotica*. Rome: Nuova Cultura.
- Pezzini, Isabella (ed.) (2001). *Trailer, spot, clip, siti, banner*. Milan: Meltemi.
- Pezzini, Isabella and Lucio Spaziant (eds.) (2014). *Corpi mediali: semiotica e contemporaneità*. Pisa: ETS.
- Polidoro, Piero (2001). Essere in rete: banner e portali. In: Isabella Pezzini (ed.). *Trailer, spot, clip, siti, banner*. Milan: Meltemi, 175–206.
- Polidoro, Piero (2009). Il concetto di stile nel design e le strategie di Apple. *Il discorso del design*, monographic issue of *E/C* 3–4, 83–94.
- Polidoro, Piero (ed.) (2018). *Post-Truth and Fake News*, monographic issue of *Versus. Quaderni di studi semiotici* 127.
- Pozzato, Maria Pia (2012). *Foto di matrimonio e altri saggi*. Milan: Bompiani.
- Schelma, Elizabeth (1991). Il libro vincerà la sfida. *La Repubblica*. 8 November 1991. URL: <https://ricerca.repubblica.it/repubblica/archivio/repubblica/1991/11/08/il-libro-vincerà-la-sfida.html> [retrieved July 20, 2021].
- Sedda, Franciscu and Paolo Demuru (2018a). Da cosa si riconosce il populismo. Ipotesi semiopolitiche. *Actes Sémiotiques* 121, 1–24.
- Sedda, Franciscu and Paolo Demuru (2018b) Social-ismo. Forme dell'espressione politica nell'era del populismo digitale. *Annali of Carte semiotiche* 6, 131–207.

- Sedda, Franciscu and Paolo Demuru (2019) La rivoluzione del linguaggio social-ista: umori, rumori, sparate e provocazioni. *RIFL. Rivista italiana di filosofia del linguaggio* 13, 1, 26–40.
- Sedda, Franciscu and Paolo Demuru (2020). Il corpo social-ista. *Actes Sémiotiques* 123, 1–14.
- Spaziente, Lucio (2019). Sub YouTube. Un'immersione nel mondo degli Youtuber. *Etnografie del contemporaneo* 2, 143–151.
- Terracciano, Bianca (2017). *Social moda. Nel segno di influenze, pratiche, discorsi*. Milan: FrancoAngeli.
- Thibault, Mattia (ed.) (2016). *Gamification urbana. Letture e riscritture ludiche degli spazi cittadini*. Rome: Aracne.
- Thibault, Mattia (2020). *Ludosemiotica: il gioco tra segni, testi, pratiche e discorsi*. Rome: Aracne.
- Thibault, Mattia and Gabriele Marino (2018). Who Run the World? Cats: Cat Lovers, Cat Memes, and Cat Languages Across the Web. *International Journal for the semiotics of Law* 31, 473–490. URL: <https://doi.org/10.1007/s11196-018-9559-8> [retrieved July 20, 2021].
- Weinberger, David (2012). *Too big to know. Rethinking Knowledge Now That the Facts Aren't the Facts, Experts are Everywhere, and the Smartest Person in the Room is the Room*. New York: Basic Books.
- Zingale, Salvatore (2009). *Gioco, dialogo, design. Una ricerca semiotica*. Brescia: Ati.
- Zinna, Alessandro (2004). *Le interfacce degli oggetti di scrittura: Teoria del linguaggio e ipertesti*. Milan: Meltemi.

Francesco Mangiapane
Researcher in semiotics
University of Palermo
Campus Universitario di Viale delle Scienze
Edificio 15, Stanza 306
I-90100 Palermo
Italy
E-Mail: francesco.mangiapane@unipa.it