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Spaces and places fifty years after the Vajont tragedy

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Abstract

The Vajont disaster (Eastern Alps, 1963) is mostly – and righteously – remembered for its almost 2,000 victims. One among the greatest tragedies of technological development, the disaster was caused by the operation of an artificial lake whose left shore became progressively unstable and finally collapsed. The resulting water overflow caused death and destruction in a large area, both downstream and upstream from the dam. Reconstruction of devastated places took decades and much of the population who had survived the disaster moved away from their original neighborhood. In addition to the tragedy of those who died and of those who could never overcome pain and trauma, another story of the Vajont disaster is the story of life-long exiles from beloved places. The future of the communities now living in the once destroyed areas stems from the disaster and from the new genius loci originated by the disaster itself.

Keywords: Vajont Disaster, Post-Disaster Reconstruction, Atopic Contexts, Dam

1. Introduction

Year 2013 marked the fiftieth anniversary of the Vajont[1] disaster, and this fact is important for the geographer at least as it is for the historian. The tragedy occurred at night on Wednesday, October 9th, 1963. At 10.39 PM a 260 million cubic-meter rocky landslide moved from the northern slope of Mount Toc, in the *Dolomiti Friulane*, and fell into the Vajont hydroelectric reservoir (Müller, 1964). A 50 million ton water mass was pushed by the landslide against the opposite shore, raising up to about 230 meters above the original level. It then divided into two almost equal halves. One moved upstream, into the eastern section of the reservoir. It devastated the shores, taking 158 lives in the Erto-Casso area. The second water-mass flowed over the dam, falling almost vertically for 430 meters into the narrow Vajont canyon. It then moved downstream, acquiring further speed and energy, until it reached town Longarone, lying 1.8 Kilometers ahead. Several inhabited areas were

[1] In the toponym "Vajont" there is an Italian semi-vowel "j", whose correct pronunciation may cause some difficulty to the English speaker. For this reason, the variant "Vaiont" is sometimes used in English texts, due to its easier correct reading (Semenza, 2005, p. 249, endnote 1. See also http://archive.is/ak6Wp). The sound of the two variants is almost identical in Italian and both were used historically. In the recent past, however, the variant "Vajont" became prevalent in Italy and it is therefore used in this paper.

destroyed. 1,752 people died downstream from the dam, in less than four minutes. There were 1,910 casualties[2]. The Vajont dam was supposed to become a world technological marvel: 261.6 meters of height, 190 meters of length at the crowning[3].

The dam had been sited near the confluence of two valleys, the wide Valle del Piave on the west, a glacial valley whose orientation is perfectly north-south in the area; and the Valle Ertana on the east, narrower and deeper, cut by torrent Vajont almost perfectly along an east-west axis. The orographic division coincided with an administrative boundary between Veneto and Friuli Venezia Giulia: it crossed the Valle Ertana just a few meters downstream from the dam. The environmental configuration of the two valleys was similar, but from an anthropization point of view, the so called "Longaronese" and the Valle Ertana hosted two relatively different landscapes. Both areas had century-long histories of forestry; the Longaronese had a strong Venetian identity and as early as 18th century it had hosted an active enterpreneur *bourgeoisie*.

When works at the dam began, in summer 1957, Longarone had acquired the nickname of "Piccola Milano" (Small Milan) (Zangrando, 1988, p. 51). It had dozens of economic activities and it was driving the largest and most efficient industrial district in the Province of Belluno[4]. In the early Sixties Italy was enjoying the beginning of the so called "Economic Miracle"; this was also the case in the *Longaronese*. Longarone, the small 4,500 people town was in fact the "central place" for a much wider area in the surroundings; it had industries, a growing tertiary sector and, most of all, the taste and the appearence of the city it had always aspired to become (Zangrando, 1988, p. 52). The Valle Ertana, in turn, was a microcosmos in which small communities kept two different geocultural backgrounds: the Venetian and the Ladin ones, respectively represented by the tiny towns of Casso and Erto. The former was, in fact, a hamlet under the jurisdiction of the latter even though the two communities showed a sort of typical antagonism. Erto and Casso took care of small farmlands and shared a common tradition for wood-cutters, timber freighters, cableways builders. Through the nineteenth century and the beginning of the twentieth, a common feature of Erto-Casso and the Longaronese was a high number of emigrants.

2. Before the Disaster

The future landscape of the area, as it was conceived in 1960-1963 was partially captured in the *Piano Regolatore Intercomunale*, established between nearby Castellavazzo and Longarone: A well organized modular system which could provide services to a wider geographic area. In 1957 most people in the region saw no reason to worry about the presence of the dam. It was the best structure of that kind ever built, by the most expert technicians on behalf of one of the most powerful and whealty energy service providers in Italy, SADE, or Società Adriatica Di Elettricità. Had not it be safe, they would have not built it there (Merlin, 1997, pp. 62-63).

Unknown to the builders, their work was bringing to reality an ancient profecy, which is told to have existed in the Erto community through the ages. According to this legend, based evidently on the experience of landslides blocking Alpine rivers, Erto was supposed to become, someday, a large town. After a time of prosperity, however, it was going to disappear in the abyss of a lake[5].

[2] The final complete list of casualties was available at the Comune di Longarone no earlier than 2008. The document was prepared by survivor Mr. Gianni Olivier. He took more than a year of painstaking work, along with his wife, merging archive data with personal memories and witness accounts. Before that publication, most lists of casualties, even those included as documents in official prosecutions, contained errors and inaccuracies.

[3] There are several publications regarding the dam and its technical features. Suggested readings for a first approach to this important element in the history of hydroelectric technology are: Società Adriatica di Elettricità, 2001; Sacchet, 2003.

[4] For an overview of this aspect of Longarone's history, see Deon Cardin 2008. A wider historical discussion for the entire province of Belluno, and for the early decades of the 20th century, can be found in Larese and Sandi, 2012.

[5] This fact is reported by De Fozza, 1959, pp. 137-139, and Semenza, 2005, p. 173.

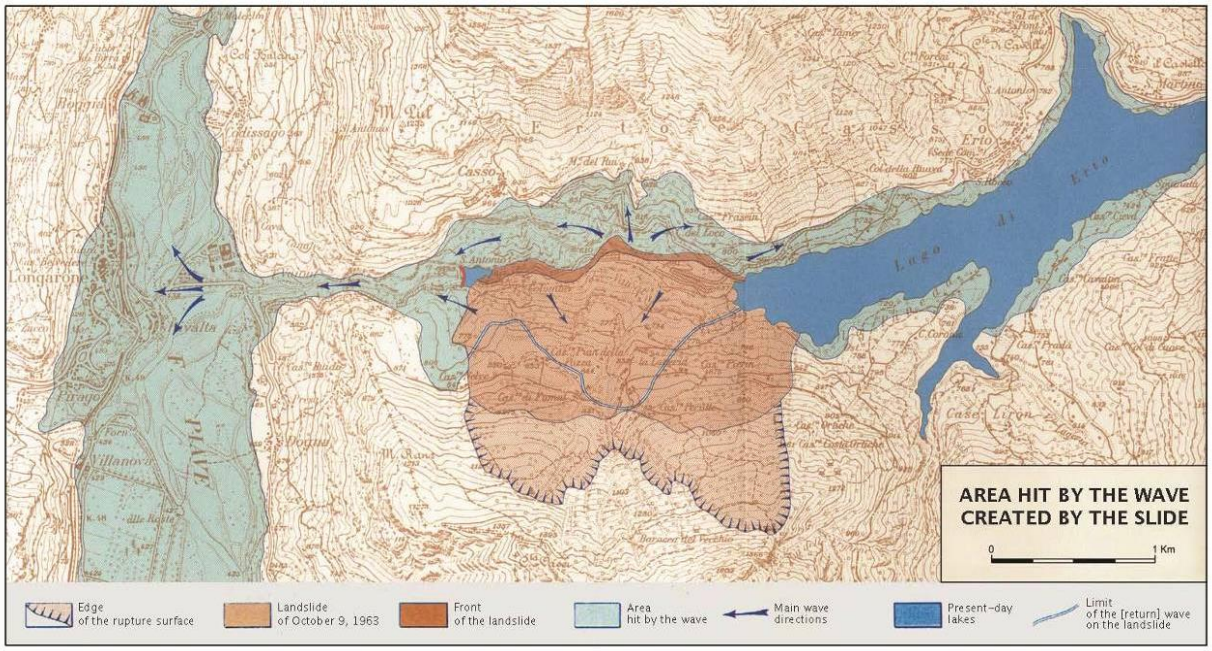

Figure 1. General map of the Vajont disaster as published in Semenza, 2010 (pp. 142-143) modified from Carloni and Mazzanti, 1964.

Figure 2. The Vajont reservoir in 1962 in a well known Ghedina postcard. At the time of this image, the facility was undergoing its second load test. The water was being risen up to 700 meters a.s.l (the top of the dam was at level 722.5). The level was reached for the first time during the summer. Near the top of the image it is possible to see Casso. Closer to the dam are SADE service buildings. Mount Toc can be partially seen on the right; the landslide moved from the slope on the right of the picture and impacted against the opposite shore of the lake, pushing the water mass ahead. The foremost part of the unstable mass, the "Punta del Toc", is visible as the rocky promontory on the lake, near the right margin of the image. Photo: Ghedina.

Figure 3. Downtown Longarone shortly before the disaster (above) and in the aftermath of the catastrophe (below). References for comparing the images are the century-old "Murazzi", i.e. thick walls protecting farming terraces, and the long relief which hosted the railway. A small group of buildings survived at the northern margin of the town; the most damaged ones were later torn down. Photo: Ghedina.

An artificial lake began indeed its existence in the Valley in 1960 as testing of the reservoir was initiated.

Throughout its history before the disaster, the reservoir affected primarily the Valle Ertana. As a matter of fact, the local residual forestry and agricultural activities went into their final decadence as several farmlands of the Valley were expropriated and then flooded by the new reservoir. For a new "landscape" to settle into the valley, however, tests of the facility were to finish and regular operation of the plant was to start[6].

Many of the villagers felt that the lake had flooded and buried memories of beloved places. They adjusted to the change, while proudly keeping much of their ancestors' habits and worldviews. During the entire period of existence of the reservoir, though, Erto's community strongly felt and repeatedly communicated – even at high official levels – a deep concern about the risk of landslides caused by the presence of the lake. These concerns led to public statements, political and legal actions, whose echo reached the press. Reporter Tina Merlin[7] published three articles on this topic between 1957 and 1959[8]. In most cases, either Merlin's articles or the Erto township's public statements were inexact or wrong in specifying the actual nature of the threats (Semenza, 2005, pp. 151-152)[9]; but the final outcome was that the fears about a catastrophic disruption of the life in the valley became real due to other phenomena.

The possibility of a landslide was actually forseen in accurate terms about four years before the event. Edoardo Semenza[10]'s studies had demonstrated the presence of a potentially unstable mass, involving a large portion of the left shore of the lake, i.e. Mount Toc northern slope. Semenza, a SADE consultant geologist, had correctly estimated the sliding volume and had properly recognized some of its main features. Carlo Semenza[11], SADE chief engineer

[6] Full test of the reservoir would have required a filling to full capacity, several additional load tests and the demonstration that in such conditions there was no major instability or dangerous condition affecting the infrastructures. Had the disaster not occurred, the full testing of the facility would have taken long after year 1963.

[7] Clementina "Tina" Merlin (1922-1991) was a journalist, reporter and writer. From 1943 to 1945 she operated as a partisan in the Italian territories controlled by German and Fascist troops as the so-called "Alpen Vorland". After WWII she began to work for "L'Unità" newspaper (1951-1980). From 1964 to 1970 she was as a member of the Belluno Province Council with the Italian Communist Party (PCI). She remained politically active while continuing her work as a writer and journalist through the rest of her life.

[8] Articles were published on the "L'Unità" on May 5th 1959 "*La SADE spadroneggia ma i montanari si difendono*", November 8th, 1960 "*Una gigantesca frana precipita ad Erto nel lago artificiale costruito dalla SADE*" and February 21st 1961 "*Un'enorme massa di 50 milioni di metri cubi minaccia le vite e gli averi degli abitanti di Erto*".

[9] The disaster was caused by a landslide from Mount Toc. The unstable mass coincided with rocky walls, woods and a farming area which normally hosted a very limited, seasonal population. The primary concern expressed by Erto in the years before the disaster referred to other areas downhill from Erto itself, at the opposite side of the valley. The same concern was referred to by Erto alderman Osvaldo Martinelli in a letter to ENEL and public offices about one month before the disaster (Martinelli, 1976, p. 213). However, repeated geologic surveys near Erto had excluded, as early as 1959, the risk of landslides in the area (Semenza, 2010, pp. 35, 45-46). This was finally confirmed as not even under the powerful pressure of the disaster waves did any significant terrain slide occur in Erto. However, there was widespread concern, though rather vague in its terms. The slopes of Mount Toc were only a part of such concern since a first, premonitory landslide occurred there on November 4th, 1960, three years before the disaster.

[10] Edoardo Semenza (1927-2002). A geologist since 1955, Semenza was both a scientist and an expert in applied geology, a field that he pioneered in Italy. Since the beginning of his professional activity he was a consultant for SADE and, later, for ENEL. He thoroughly studied the Vajont landslide before and after the disaster. He later became full professor in Applied Geology at the University of Ferrara. He continued an active work as a researcher while training new generations of geologists. His advise helped Alfred Hendron and Franklin Patton in clarifying the specific causes of the Vajont landslide (Hendron and Patton, 1985).

[11] Carlo Semenza (1893-1961). A civil engineer, Carlo Semenza was SADE's director of hydraulic constructions when he designed the Vajont dam. He both designed and supervised the building of at least

and Edoardo's father, considered to undertake radical actions to solve the problems and ensure both the citizens' safety and the efficiency of the reservoir. Such actions would have been possible, but extremely hard to implement[12]. Therefore, more conventional solutions[13] were chosen, which proved inadequate to prevent a catastrophic outcome.

Limited knowledge of some phenomena; wrong interpretations about the sliding motions and their causes; wishful thinking and a rather stubborn belief that everything could be kept under control led decision-makers to progressively loose ability to recognize an overall worsening situation. In the final days before the disaster, fatal warnings, though impressigly evident, were not properly understood and did not cause effective responses. On that quiet autumn night, Mount Toc released a 520 million-tons landslide which violently collapsed into the reservoir.

In that moment, history diverted its course in Longarone and Erto-Casso.

3. Through the blank spaces

When survivors and returning migrants met on the wide desolated space which had once been Longarone, they realized that not only their dear ones and properties were gone; but the entire surrounding space was gone with them. The whole world that used to be there had just disappeared, taking away all material referents to memories.

In the Valle Ertana, the difficult logistic conditions and the – unjustified – fear of further landslides, led authorities to decide the mandatory evacuation of inhabitants (Merlin, 1997, p. 125; Semenza, 2005, p. 165). All citizens from the damaged area were recovered in other locations. In the Valle del Piave there were very few surviving buildings and they were generally not damaged in a critical way. Most other houses had simply been eroded away from their foundations.

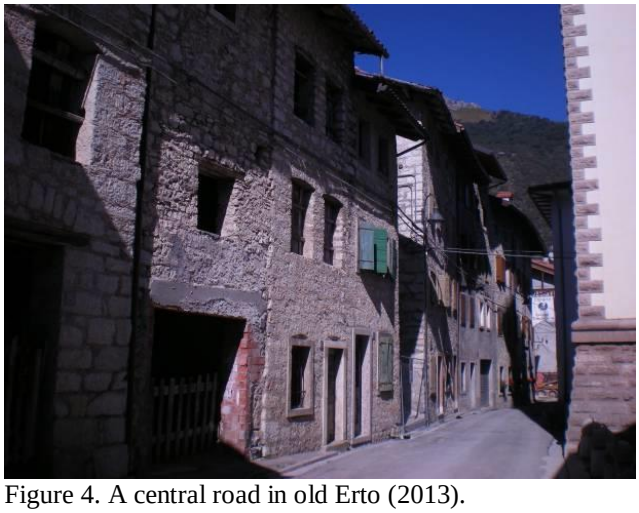

Figure 4. A central road in old Erto (2013).
Photo: G. Casagrande (September 2013).

10 dams, mostly in the eastern Alps. As awareness of problems involving the Vajont reservoir began to surface, he kept an overall prudent approach by thoroughly studying individual phenomena and by delaying operation of the facility in order to ensure safety. He died of a stroke a few days after the Vajont dam was inaugurated, two years before the disaster.

[12] Expecting some quantitative relationship between water pressure under the unstable mass and the instabilities, due to joint action of both rain and reservoir manoeuvres, Carlo Semenza proposed to discharge excess water as a measure to stabilize the landslide. Such discharge was to be obtained through the excavation of a drainage tunnel below the slide bank. Initial surveys were conducted in order to determine the depth of the baserock. Two possible variants of the project were hypothesized. A first one considered building the drainage tunnel at about level 900 m a.s.l.; a initial sketch was prepared (Semenza, 2010, pp. 90-91), but as it was demonstrated (p. 118) such a configuration would have not been successful. Another hypothesis was to excavate the tunnel around level 720. Had it been undertaken, the work was probably to prove feasible and likely to solve the instability problem.

[13] An important measure was to ensure that the reservoir level remain controllable in case of an obstruction by landslides. This required the excavation of a by-pass tunnel which connected the eastern section of the lake with the reservoir volume behind the dam. The tunnel had a diameter of 4.50 meters; the inlet was at level 617.4 m a.s.l. by the "Mulini delle Spesse" and the outlet at 600.7 m a.s.l. about 50 meters upstream from the dam (Semenza, 2010, p. 106). The by-pass tunnel had no effect in mitigating the disaster; still, it proved valuable after the catastrophe. Although obstructed by debris, the tunnel was re-opened in 1964 and fitted with a short additional segment to enable water discharge beyond the dam. The tunnel is still operational nowadays, to convey Vajont stream waters. A modification program is planned to allow for a minor energy production.

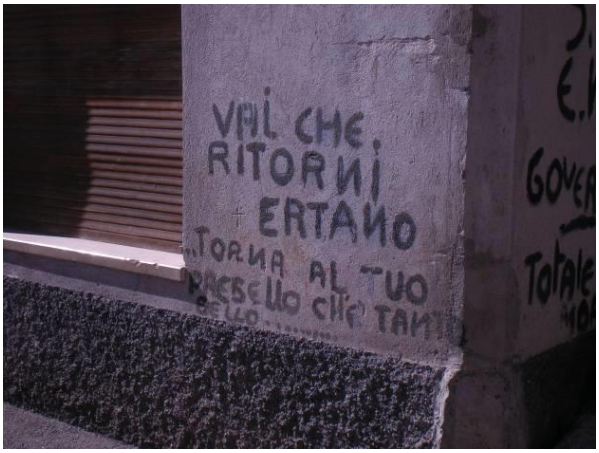

Figure 5. A testimony of the diaspora. Old writing on the wall of a house in Erto. It reads: "*Go, you'll come back,* Ertano… *Come back to your village that is so nice*…".
Photo: G. Casagrande (September 2013).

The dispersal of inhabitants was to be a temporary measure to ensure their safety and comfort, but it turned out to be excessively long. It therefore led to various outcomes.

There was a strong political debate on whether to reconstruct the settlements were they had been before the disaster, or rather to relocate them somewhere else.

In the case of Longarone, relocation would have been the easiest technical solution: it would have allowed to add living spaces to already existing service and supply networks, whereas in the destroyed area there was nothing to connect to.

Survivors and people from the former Longaronese surged. In late 1963 and early 1964 there were several protest outbreaks and road blocks to call for the towns to be reconstructed where they had been. Meanwhile, the Valle Ertana was still an off-limits space and there also, first clandestinely, then more and more openly, some of the inhabitants moved back to their houses (Merlin, 1997, pp. 128-132).

Longarone's reconstruction began. A first urban plan was prepared in 1964; as construction progressed, variants and new plans followed (Calafiore, 1984, p. 44).

After the 1963 landslide the former Vajont reservoir had remained obstructed and there was no way to discharge water from it. It therefore went on filling up naturally for months, until technical measures were taken to control its level. In the following years, a new settlement for Erto, called Stortàn, was slowly built uphill from the old town, in a zone which was considered to be altimetrically safer. Old Erto was populated again, though partially, in the years. A large part of Erto's citizens moved away to a totally different area in 1966. After a local (and controversial) vote they had accepted a relocation proposal in the flatlands near Maniago, in Friuli Venezia Giulia. The site, Ponte Giulio, was supposed to become part of a major industrial district. A whole new town was built, about 40 kms away from the Valle Ertana. Its initial name should have been *Nuova Erto* (Martinelli, 1976, p. 315) and the intention of the local community was to remain administratively united to the township of origin. That was not the case, and in 1971 the new township of Vajont was officially created.

Despite its relative proximity to the community of origin, Vajont ended up showing several features typical of an emigrant's colony: artificial and regular shapes; toponyms which recall places and facts of the "motherland". At least in the minds of the first generation of settlers, Vajont in the Maniago plains remained a substantially atopic context and, in some respects, it is still so today (Merlin, 1997, pp. 163-164, Gervasutti, 2013).

Yet, the diaspora was not over. A "Nuova Erto" was finally established in another, different location. It is a small area in Ponte nelle Alpi, Veneto region.


Figure 6. Vajont (Pordenone). The townhall.
Photo: G. Casagrande (September 2013).

Figure 7. Vajont (Pordenone), houses along Via Massalezza. The Massalezza was a stream of Mount Toc.
Photo: G. Casagrande (September 2013).

Other survivors and former inhabitants of the disaster areas moved somewhere else. They began their personal journey in new places and new lives; another part of the story, one that is more difficult to track for the historian.

By the early 1980s, Longarone was already reconstructed for the most part (Calafiore, 1984). Criteria adopted for this work indicate a "will to move on" which may sound perplexing. In a few years much work was completed on the town and the residential areas. The industrial area and other functional networks, pushed by financial aids, were reconstructed and resumed their activity. This was achieved, in many cases under non-local administrations. Structures and services were re-established but no attempt was made to reconstruct Longarone in resemblance to its original appearence. The old "little Milan" was gone for ever; the new Longarone, whose increasing population was mostly coming from other geographical areas, seemed to be projected towards a future which had little to do with the past.

4. From memory to history

New inhabitants lived next door with survivors of the disaster for years, but in most cases no particular sense of community arose[14]. Many suvivors suffered severe post-trauma psychological effects through the rest of their lives and, in some cases, to these very days (Demichelis et al., 2012).

Figure 8. Old Longarone lives today only in a very small area spared by the disaster, at the northern extremity of Via Roma. Among the few surviving ancient buildings, there is Palazzo Mazzolà (18th century), Longarone's townhall (with the two chimneys).
Photo: G. Casagrande (September 2013).

Figure 9. Longarone. A large building on present-day Via Roma.
Photo: G. Casagrande (September 2013).

[14] This complex social phenomena is reported in several works about the disaster. See: Zangrando, 1988, pp. 145-148. See also the video interview to disaster survivor and former Longarone mayor Gioachino Bratti (also current President of the *Associazione Bellunesi nel Mondo*), published online by Corriere delle Alpi in 2013 (http://temi.repubblica.it/corrierealpi-diga-del-vajont-1963-2013-il-cinquantenario/longarone-a-longarone-la-ricostruzione-difficile/).

Figure 10. Longarone. Piazza IX Ottobre.
Photo: G. Casagrande (September 2013).

Figure 11. Longarone's church, designed by architect Giovanni Michelucci was completed in 1975. It was built on the place of the 18th century Santa Maria Assunta church, totally destroyed on the night of the disaster. Very few fragments of the old church and of its fittings are preserved in the basement of the new building.
Photo: G. Casagrande (September 2013).

In Longarone, the evident lack of a unified architectural concept brought to creating artificial places, sometimes with questionable solutions[15]. The new residential texture seems to be formally inconsistent and does not keep anything of the old Longarone's typical unity and harmony. In some instances, there is even the impression that every line in the drawing of the new town is a constant and definitive recall to the shape of the dam and to a stylized wave: sometimes explicitly, sometimes with lesser evidence, builders carved in stone and concrete the presence of a new *genius loci* for Longarone: Half a century from the disaster, many details in the new place seem to proclaim that its birth and existence are directly (and everlastingly) originnating from the night of the catastrophe[16]. The Vajont dam and Mount Toc are no longer a threat; and nature is not felt as an enemy. The warning to humans not to provoke the forces of nature is echoed by the very places where this truth was learnt so harshly. The story of survivors is the story of the end of a world[17]. It is a story of places which were cancelled or still exist, although with breaks of impressing sharpness.

Figure 12. Houses in the high area of Stortàn. Like Old Erto, the new town keeps the nature of a ripid and obviously dense urbanization, although in the framework of present-day living standards.
Photo: G. Casagrande (September 2013).

[15] See the video interview to Renato Migotti (a disaster survivor and current President of the *Associazione Superstiti del Disastro del Vajont*) published in 2013 by *Correre delle Alpi* (http://temi.repubblica.it/corrierealpi-diga-del-vajont-1963-2013-il-cinquantenario/longarone-a-longarone-la-ricostruzione-difficile/).

[16] For hints and / or discussions of this aspect, see: Zangrando, 1988, p. 157.

[17] In the aftermath of the catastrophe, a typical problem faced by both survivors and rescuers was the almost complete spatial disorientation due to the destruction of previously existing spaces. In many cases, surveyors had to be deployed in the area so to geometrically calculate position of lost buildings and premises. For a first idea of this "perspective of annientation" see Zangrando, 1988, p. 23.

It ends up being a story which disintegrates in many individual stories of *life in the* "*elsewhere*" whether this "elsewhere" is in far off lands, in relatively close places or even in spaces which had been familiar, but in which there is no longer any previously recognizable *espace vecu* nor *perspective of experience* (Fremont, 1974; Tuan, 1977).

Looking around, then, for physical referents of the past landscape, it becomes necessary to put some effort in trying to at least locate some traces of it. Most of them are in the bare geomorphological configuration: really not much, for trying to have the true feeling of being there.

What about today?

The Valle Ertana is now part of the Dolomiti Friulane Regional Park. The existing inhabited areas are occupied by survivors of the disaster, by their descendants and by a relevant number of new residents.

The valley is a beautiful natural environment, very attractive for tourism.

Figure 13. The Vajont dam as it appears today, seen from the western section of the landslide. Both the gravelish areas and the relatively young woods visible between the observer and the dam are parts of the slidden mass.
Photo: G. Casagrande (September 2013).

The Longaronese is once again a central place whose influence range got even further. Since many years now, it is certainly back in the status of the main industrial district of the province of Belluno. It features elements of excellence at European level. It has a busy tertiary sector, and is becoming a hub for several cultural events and initiatives.

Figure 14. Casso on the slope of Mount Salta, formerly the right side of the Vajont reservoir. On the night of the disaster, the hamlet was protected by its height and by the presence of the limestone cliff in the foreground, which partially blocked the wave. The rocky wall is currently a renowed training site for climbers. The road, visible in the lower part of the image, and the trees on the right, stand on the landslide mass.
Photo: G. Casagrande (September 2013).

Fifty years after the disaster, the Longaronese and the Valle Ertana are no longer a world of their own; their path rejoined the path of the whole surrounding region. But as memory fades into history and for the very first time the word "forgiveness" begins to echo in those lands (Priante, 2013), a significant heritage remains. In Italy and not only here, absolute faith in technological progress was given, by Vajont, an unprecedented strike. In the past fifty years the construction of hydroelectric facilities in Italy was slowed down radically as it was the case of other large installations which might have directly or indirectly affected the environment. Technology remains the acknowledged driver of better life conditions; but at least in the common perception a need is felt, to achieve a higher environmental sensibility and a greater ethical awareness (Petley, 2007). A generally-shared new attitude towards nature is now common, although it often proves unable to prevent disasters.

Ironically, the Vajont catastrophe *per se* faded away quickly, and for decades, from Italian public conscience. In fact, the disaster was barely known by the general public until 1997, when a famous TV show by actor Marco

Paolini brought it suddenly back to the full attention of the country[18].

However, in the work of technicians, decision makers and in the general culture of the people, the horrible loss of life of that night, along with other tragedies occurred in similar contexts throughout Europe, did contribute to move minds towards a new worldview; a worldview about technology, environment and landscape.

In this different state of mind, that an entire nation learnt almost unknowingly through half a century, lays the true hope that at least some mistakes made then will not be repeated.

References

1. Calafiore G., *Longarone, rinascita di una città*, Pubblicazioni dell'Istituto di Geografia, Facoltà di Lettere e Filosofia, Rome, Università di Roma "La Sapienza", n. 25, 1984.
2. Carloni G.C. and Mazzanti R., "Rilevamento geologico della frana del Vaiont", in Selli R., Trevisan L., Carloni G.C., Mazzanti R. and Ciabatti M., *La frana del Vajont*, *Giornale di Geologia*, 2, vol. 32, 1, 1964.
3. De Fozza S., "Il magnifico marmo della cava di Buscada farà di Erto la 'città' voluta dalla profezia?", il Gazzettino, 30 dicembre 1959, in Martinelli O., *Il Mio Vayont*, Vajont, Comune di Vajont, 1976, pp. 137-139.
4. Demichelis O., Coletti M. and Toffolo G., *Psicologia dell'emergenza: il caso Vajont*, Savigliano, L'Artistica Editrice, 2012.
5. Deon Cardin E., "Il lavoro nelle valli del Piave e del Vajont prima del 9 ottobre 1963", *Quaderno Pulchra*, 5, 2008.
6. Frémont A., "Recherches sur l'espace vécu", *Espace Géographique*, 3, 3, 1974, pp. 231-238.
7. Gervasutti S., "Ritorno alla diga, 50 anni dopo. Il paese senz'anima figlio del Toc", *Messaggero Veneto*, 13 agosto 2013, http://messaggeroveneto.gelocal.it/tempo-libero/2013/08/18/news/ritorno-alla-diga-50-anni-dopo-il-paese-senz-anima-figlio-del-toc-1.7594766.
8. Hendron A.J. and Patton F.D., *The Vaiont slide, a geotechnical analysis based on new geological observations of the failure surface*, Technical report GL-85-5, Washington, D.C., Department of the Army, US Army Corps of Engineers, 1985.
9. Larese G. and Sandi M. (Eds.), *La società e l'economia bellunese nei primi decenni del Novecento*, Belluno, Camera di Commercio di Belluno, 2012.
10. Martinelli O., *Il Mio Vayont*, Vajont, Comune di Vajont, 1976.
11. Merlin T., *Sulla pelle viva. Come si costruisce una catastrofe. Il caso del Vajont*, Verona, CIERRE Edizioni, 1997.
12. Müller L., "The rock slide in the Vaiont valley", *Felsmechanik und Ingenieur-geologie*, 2, 1964, pp. 148-212.
13. Paolini M. and Vacis G., *Il racconto del Vajont*, Milan, Garzanti, 1997.
14. Petley D., "The Vajont (Vaiont) landslide", http://archive.is/ak6Wp.
15. Petley D., "Vajont's Message for the Three Gorges", *Chinadialogue*, 5.11.2007, https://www.chinadialogue.net/article/show/single/en/1448-Vajont-s-message-for-the-Three-Gorges.
16. Priante A., "È giunta l'ora di perdonare il Vajont?", *Corriere del Veneto*, 31 luglio 2013, http://corrieredelveneto.corriere.it/veneto/notizie/cronaca/2013/31-luglio-2013/-giunta-ora-perdonare-vajontsi-tempo-no-non-sara-mai-222 2413465475.shtml.
17. Sacchet A., *Vajont la diga*, Longarone, Associazione Pro-Loco Longarone, 2003.
18. Semenza E., *La storia del Vajont raccontata dal geologo che ha scoperto la frana*, Ferrara, K-flash, 2005.

[18] Marco Paolini is an Italian actor. Deeply touched by Tina Merlin's work, Paolini decided to divulgate the story of Vajont. He did so by preparing a monologue, which he presented for years in theaters, schools and public spaces. On the night of October 9th, 1997, the monologue took place at the Vajont dam in front of survivors, relatives and common people. The performance, broadcasted live by RAI-2, a major Italian network, had a stellar success. The script of the show was published by Garzanti in the form of a booklet with a chronological appendix by F. Niccolini (Paolini and Vacis, 1997). Sixteen years later, recordings of that broadcast are still published in several formats and widely circulate in Italy.

19. Semenza E., *The Story of Vajont Told by the Geologist Who Discovered the Landslide*, Ferrara, K-flash, 2010.
20. Società Adriatica di Elettricità, *Le dighe e le centrali idroelettriche del bacino del Piave. Elenco completo degli impianti, con i dati tecnici al 1963*, Ristampa di pubblicazioni ufficiali della SADE, Società Adriatica di Elettricità, Treviso, Camillo Pavan Editore, 2001.
21. Tuan Y., *Space and Place. The Perspective of Experience*, Minneapolis, University of Minnesota Press, 1977.
22. Zangrando F., *Vajont l'acqua e la terra*, Longarone, Associazione Proloco e Comune di Longarone, 1988.

