The room of the triclinium in the Villa of the Mysteries in Pompeii distinguishes itself as an enigmatic representation in an ideal architectural setting. The plinth with a black background, with geometric ornamentation, is the result of a restoration that took place at the time of the III style, while the upper part of the walls shows the original decoration datable in II style. The pictorial cycle focuses on the evident centrality of the couple Dionysus and Arianna: the reference to Dionysus is present for the initiation into the Dionysian rites, and Arianna highlights the pre-eminence of the female figure. It is singular that many centuries later, a treatise writer of the 16th century, Filarete, describes architectures and cities as if they were a father, an enlightened one, and a mother, the architect, who generates the ideas of the prince. The research on the Villa of the Mysteries has offered the chance to reflect on technologies as pros- theses of thought and logos that generate the drawing of the existing or the drawing of what has not been realized yet. The age we live in is characterized by the use of advanced digital technologies in the training and research activity of architects and designers: the experience conducted in Pompeii reaffirms the authoritativeness of thought that cannot break the essential link that binds the person who draws with the object, thus answering our questions if it is possible to establish a new paradigm that links the observer to the object, often oriented only by iconic libraries of software programs. As we know, artefacts or landscapes are silent: they ‘speak’ through the observer, transferring to the hand the responsibility to express what the mind generates.

Keywords: HBIM, Pompeii, survey.

1. The Case Study

The room of the triclinium in the Villa of the Mysteries in Pompeii, an enigmatic representation in an ideal architectural setting, is divided into ten panels representing an ancient mystery ritual, separated by painted pilasters. In the painted cycles of the villa, in fact, we find the presence of painted architectural structures that lend a perspective illusion typical of the geometrical culture of the time.

In fact, the sinopia technique that combines thought and material culture was widely used until the early Renaissance years. The scenographic representation is presented on three levels that have different dating. The plinth with a black background, in mar- ble imitation, with geometric ornamentation, is the result of a restoration that took place at the time of the III style, the upper part of the walls in which the scenes of the rite are de- picted shows the original decoration datable to the II style, finally, there is the upper frame on which a sumptuous frieze rises. The floor, made up of quadrangular Palombino slabs framed by slate strips, has a simple, discreet floor ornamentation is not too close your eyes off the frescoed walls.

In the megalographies on the walls of the tri- clinium it’s the scenes without the construc- tion of vanishing points that are represented; in this regard, Migliari (Fasolo, Migliari 2018), analysing the parietal perspectives of the Ro- man villas, argues that a single glance cannot hold a parietal perspective and that the co- herence of the vanishing points is not a deter- mining feature for the legitimacy – or lack of

Keywords: HBIM, Pompeii, survey.

La megalografia nella Villa dei Misteri in Pompei

La stanza del triclinio nella Villa dei Misteri in Pompei si caratterizza come un’enigmatica rappresentazione in un’ideale cornice architettonica. Nel ciclo pittorico, lo zoccolo a fondo nero, con ornamentazione geometrica, è il frutto di un restauro avvenuto all’epoca del III stile, mentre la parte alta delle pareti mostra l’originaria decorazione databile al II stile. Il ciclo pittorico è imperniato sull’evidente centralità della coppia Dioniso e Arianna; il riferimento a Dioniso è presente per l’iniziazione ai riti dionisiaci e Arianna è posta per evidenziare la preminenza della figura femminile. È singolare che molti secoli dopo, un trattatista del Cinquecento, Filarete, scrive che per realizzare una città è necessario che ci sia una coppia, un padre, un principe illuminato, e una madre, l’architetto, che genera le idee del principe. La ricerca condotta presso la Villa dei Misteri è stata l’occasione per riflettere sul ruolo delle tecnologie che sono solo protesi del pensiero e del logos, generatrici del disegno dell’esistente o del disegno di ciò che non è stato ancora realizzato. Chiedersi nell’epoca che viviamo, connotata dall’utilizzo di tecnologie digitali avanzate nella formazione e nell’attività di ricerca degli architetti, dei de- signer, se sia possibile instaurare un nuovo paradigma che leggi l’osservatore all’oggetto, spesso orientato solo dalle libriere iconiche dei software, trova nell’esperienza condotta sulla Stanza dei Misteri, la riconferma dell’autorevolezza del pensiero che non può spezzare il legame imprescin- dibile che lega colui che disegna con l’oggetto. Come sappiamo i manufatti o il paesaggio sono muti: parlano attraverso chi osserva trasferendo alla mano la responsabilità di esprimere ciò che la mente genera.

Parole chiave: HBIM, Pompei, rilievo.

1. Il caso di studio

La stanza del triclinio nella Villa dei Misteri in Pompei, un’enigmatica rappresentazione in un’ideale cornice architettonica, si suddivide in dieci riquadri rappresentanti un antico rituale misterico, divisi da lesene dipinte. Nei cicli pittorici della villa, infatti, si riscontra la presenza di strutture architettoniche dipinte che conferisco- no un’illusione prospettica, testimonianza della cultura geometrica del tempo.

1.1. La sinopia

Il tema, oggetto del presente contributo, affronta lo studio della geometria dello spazio e il punto di vista simbolico attraversato dal pensiero do- minante nel periodo che va dal 59 a.C. al 31 a.C., ovvero dal consolato di Giulio Cesare alla vittoria di Ottaviano. Le pareti del fondo che ospitano i personaggi sono di colore rosso cinnabro (fig. 1). Il disegno dell’artista si imposta sull’utilizzo della sinopia, ovvero di un disegno preparatorio usato non solo per la pittura di fresco ma anche per il mosaico. La sinopia, eseguita con terra rossa sulla parete, una volta ultimata, permette all’artista una rappresentazione graduale in un lasso di tempo che va dal disegno allo stesso ricco- pero con lo strato finale di intonaco, rilievi e ripensamenti in corso d’opera dell’artista.

Infatti, la tecnica della sinopia che unisce pen- siero e cultura materiale è stata ampiamente uti- lizzata fino ai primi anni del Rinascimento. La rappresentazione scenografica si presenta su tre livelli che hanno una differente datazione. Lo zoccolo a fondo nero, ad imitazione mar- ble, con ornamentazione geometrica, è stato ampiamente utilizzato come un frutto di un restauro avvenuto all’epoca del III stile, la parte alta delle pareti nella quale sono raffigurate le scene del rito mostra l’originaria decorazione databile nel II stile, infine vi è la cornice superiore sulla quale si leva un fastoso fregio. Il pavimento, costituito da lastre quadran- gulari di palombino incorniciate dalle listelle di ardesia, si presenta con una semplice orna- mentazione pavimentale disposta in modo tale da non distraerti lo sguardo dalle pareti affacciate. Nelle megalografie sulle pareti del triclinio sono rappresentate le scene senza costruzio- ne di punti di fuga; infatti, a tal proposito il Migliari (Fasolo, Migliari 2018) nell’analizzare le prospettive parietali delle ville romane, so- stiene che in un unico sguardo non può essere ricompresa una prospettiva parietale e la coe- renza dei punti di fuga non è una caratteristica determinante per la legittimità o meno della

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it – of the geometric construction (fig. 2). This critical observation is part of the broad debate centred on the theories advanced by Panofsky and widely criticized by Decio Gioseffi. If a point of view were to be sought within the wall sets of the Villa of the Mysteries, this must be sought outside the environment itself. The artist dematerializes the walls and bases his design on the perspective towards the gulf as the atrium is no longer the large entrance hall but is the panoramic hall around which the other rooms are arranged; in a full humanistic architectural composition, it determines a profound interaction with the surrounding landscape. The representations have elements of the natural environment, of agriculture, opening the walls to the imagination towards the surrounding landscape, towards the gulf: not a memory of the outside but the very concept of life. After all, the typological setting is in use and can be found in other villas of the same era, the Villa dei Papiri in Herculaneum and the Villa di Arianna in Stabia, almost overlapping spatially.

Therefore, in the Villa of the Mysteries, the iconographic apparatus and the typological system strongly promote the concept of the spirit of the time by integrating the interior space with the exterior (fig. 4). The same rooms surrounding the triclinium room enhance the overall plane-volumetric design and the paths both to access and refer to the surrounding rooms; in fact, you have to cross an antechamber designed as a portico, punctuated by marble pillars, between which hang festoons of leaves that support a golden entablature, with a purple episyle. The back wall of the portico, with a black background, opens into the view of an airy garden, populated with pomegranate trees.

On the other hand, to the north-west of the triclinium room, an environment with strong iconographic architectural characterization, with Ionic columns that support coffered ceilings, presents a further illusionistic element given by the representation of a closed door, surmounted by an arch opening towards the sky. It is a quest to expand the space through the coexistence of several random points of view here graphically.

costruzione geometrica (fig. 2); osservazione critica che si inserisce nell’ampio dibattito intermittente sulle teorie portate avanti da Panofsky e ampiamente dibattute da Decio Gioseffi. Se si dovesse ricercare un punto di vista all’interno delle scenografie parietali di Villa dei Misteri, questo va ricercato al di fuori dell’ambiente stesso. L’artista smaterializza le pareti e fonda il proprio disegno sulla prospettiva verso il golfo in quanto l’atrio non è più il grande salone di ingresso ma è il salone panoramico atorno al quale si dispongono gli altri ambienti; in una piena composizione architettonica umanistica, determina una profonda iterazione con il paesaggio circostante.

Il rilievo delle Stanze dei Misteri, Pompei, con tecnologia laser scanner 3D © L’autrice.

Le rappresentazioni hanno elementi dell’ambiente naturale, dell’agricoltura, che aprono le pareti verso il paesaggio circostante, verso il golfo che non sono memoria dell’esterno ma concezione stessa della vita. Del resto l’impostazione tipologica è in uso e riscontrabile in altre ville della stessa epoca, la Villa dei Papiri a Ercolano e la Villa di Arianna a Stabia, quasi sovrapponibili spazialmente intorno alla sala del triclinio (fig. 3). Pertanto, nella Villa dei Misteri, l’apparato iconografico e l’impianto tipologico integrando lo spazio interno con l’esterno promuovono for-
symbolic meanings that have led to hypothesising representations are permeated by complex reference to Dionysus is present for the initiatory of the couple Dionysus and Arianna; the triclinium shows episodes from the life of Dionysus and Arianna; finally, a third interpretation sees in the frieze a religious sense or the representation of the ceremony of initiation of the bride to the marriage rite which is recalled by the wedding scene of Dionysus and Arianna. Sono non meno di 29 personaggi che vivono nell’ambito della sala, attori di una rappresentazione che, contrariamente al II stile, come scrive il Maiuri, sembrano far parte di una unica azione formata di tanti episodi sincroni. L’apparato decorativo dell’ambiente del triclinio rappresenta indubbiamente scene commesse dal proprietario. Ci sono differenti ipotesi inerenti l’originario proprietario della Villa dei Misteri ma le numerose tracce di indizi nelle iscrizioni nonché il rinvenimento di un anello-sigillo bronzo sembrerebbero ricondurre la proprietà alla famiglia degli Istacidi, nota famiglia della Pompei di età augustea. Nello specifico, è possibile attribuire la proprietà della Villa dei Misteri a Numerius Ictius che fu uno dei duomini municipali di Pompei all’inizio del I secolo; probabilmente Numerius sarebbe stato il committente della decorazione architettonica e figurativa. L’oeuvre, così denominato da Vitruvio (oeus aegyptius) nel descrivere un ambiente della villa romana, ovvero l’ampia stanza di soggiorno o ricevimento della villa, è caratterizzato dalle grandi e preziose mega- graphiche ispirate ai riti dionisiaci e orfici, fu poi adibito a triclinio, destinato alla vita quotidiana della famiglia in quanto ubicato nell’adattamento di una doppia alcova.

2. Il significato delle rappresentazioni
Il ciclo pittorico è impregnato sull’evidente centralità della coppia Dionysus e Arianna; l’interesse ispirato a Dionisio è concretamente presente per l’iniziazione ai riti dionisiaci e Arianna, raffigurata in posizione centrale, è posta per evidenziare la preminenza della figura femminile rispetto al dio. La megalografia, con molta probabilità, rappresenta i riti iniziatici di carattere dionisiaco; le raffigurazioni sono permeate da complessi significati simbolici che hanno portato ad ipotizzare differenti chiavi di lettura (Vigilii 2008). Secondo alcuni studiosi nella raffigurazione vengono mostrati episodi della vita di Dionisio e la sua iniziazione ai misteri, altri ne leggono i preparativi delle nozze di Bacco e Arianna; infine la terza interpretazione vede nel fregio un senso religioso ovvero la rappresentazione della cerimonia di iniziazione della sposa al rito del matrimonio che viene richiamato dalla scena delle nozze di Dionisio e Arianna. Sono non
Pertanto, la strada maestra è indicata proprio nell’invito a pubblicare in questo numero della rivista «XY» che recita «grazie alla geometria e alla grafica siamo in grado di spiegare le cose a noi stessi e/o ad altri tramite approssimazioni, sovrapposizioni e riformulazioni successivi». L’orientamento disciplinare conferisce sempre più al pensiero il primato rispetto alle tecnologie, anche le più avanzate che ci permettono di entrare nel corpo di ciò che si rappresenta e quindi nella fisicità, per analizzare tutte le possibili dimensioni costituenti la fisicità degli oggetti da indagare e rilevare. Le tecnologie rappresentano, dunque, solo protesi del pensiero e servono solo ad aumentare, oltre le coordinate cartesiane, le dimensioni dei materiali, la meccanica e i comportamenti dei

Figure 5
Elaborazione grafica dell’autrice: lo studio dei differenti vanishing points nella megalografia nell’ambiente nei pressi dell’affresco indagato.

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has not been realized yet (project) but which could be defined as the survey of what the mind generates. Therefore, the main way is indicated precisely in the invitation to publish in issue 11 of “XY” journal which reads, “thanks to geometry and graphics we can explain things to ourselves and/or to others through approximations, superimpositions and late remakes”. The disciplinary orientation gives rise to more and more primacy over technologies, even the most advanced that allow us to enter the body of what we represent and therefore into physicality, to analyze all the possible dimensions constituting the physicality of objects to investigate and detect. Technologies, therefore, represent only prostheses of thought and only serve to increase, beyond the Cartesian coordinates, the dimensions of the materials, the mechanics and behaviour of the materials, the structure, and the intangible components that lead to potential discoveries on the thread of geometry, supported by physics and allowing the observer to investigate beyond the visible. The drawings and representations appear as a product of the mechanics and the environment, the materials, the mechanics and the behaviour of the materials, the structure, and the intangible components that lead to potential discoveries on the thread of geometry, as a representation. Graphic processes based on digital applications do not develop on the story of the experiences that are the basis of history and knowledge. In fact, artefacts and landscapes are silent: they speak through the observer who, by drawing, transfers to the hand the responsibility of expressing what the mind generates. The proposed research system focuses on three moments of geometry that measure the environment, its spatial connotation and the pre-restoration pictorial cycle (fig. 7); the second is aimed at spatial definition through innovative technologies, which are not only epistemological ones (rendering) but which enter into the body of the architecture by investigating the hidden dimensions in the structure of the monument (matter, physicochemical response to external agents) and the third linked to the post-restoration conditions inherent primarily in the safety of the relationship between the painted surface and the structure subjected to seismic stresses. A pre-restoration analysis was conducted on the Villa of the Mysteries first and then in situ.

3. The Re-drawing of the Walls in the Room of the Mysteries

The representation and re-drawing of the frescoed walls of the enclosure of the Room of the Mysteries should be read in this direction, which expands the limits and boundaries of thought by bringing the surrounding territory and care into the architectural space, understood as the health of the territory itself (fig. 5). This attitude must be the engine of research for architects, engineers and designers, to establish a new paradigm that binds the observer to the object not oriented by the iconic software libraries; the experience conducted in the tri-clinium room of the Villa of the Mysteries in Pompeii consolidates the authority of critical thinking confirming the theory that the various forms of analogue representation are opportunities for critical thinking on space and reality that have not been overcome by computerized analytical procedures (fig. 6).

Certainly, it is not possible to entrust the opportunities deriving from thought to computerized procedures; the technologies, as mentioned above, are only instrument prostheses of the mind. Graphic processes based on digital applications do not develop on the story of the experiences that are the basis of history and knowledge. In fact, artefacts and landscapes are silent: they speak through the observer who, by drawing, transfers to the hand the responsibility of expressing what the mind generates. The proposed research system focuses on three moments of geometry that measure the environment, its spatial connotation and the pre-restoration pictorial cycle (fig. 7); the second is aimed at spatial definition through innovative technologies, which are not only epistemological ones (rendering) but which enter into the body of the architecture by investigating the hidden dimensions in the structure of the monument (matter, physicochemical response to external agents) and the third linked to the post-restoration conditions inherent primarily in the safety of the relationship between the painted surface and the structure subjected to seismic stresses. A pre-restoration analysis was conducted on the Villa of the Mysteries first and then in situ.

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nere until its final representation that captures both the appearance of the representation, as it appears once restored, but also what is inside the masonry which implies an essential relationship between the pictorial surface and its constructive structural connotation.

The restitution of the point cloud, obtained from survey processing operations carried out with a 3D laser Scanner, made it possible to have a detailed representation of the entire Villa of the Mysteries as well as the morphological consistency and structural parts of the building. This is because in the applications of HBIM (Heritage Building Information Modeling) and in particular of the structural one, it is possible to grasp not only the state of the art as it appears to us with the voids of the architecture that determine a structural spatial connotation and in particular also and above all determine fragility and lability, therefore the analysis that has been carried out has a further purpose: providing a method for the resilience of the archaeological monument that cannot be traced back to the culture of its antecedent connotation, before the intervention of 79 b.C. but our aspect is, recalling Cesare Brandi (Brandi 2000) that of transmitting to the future what has come down to us.

In conclusion, the contribution arises from the opportunity to investigate through a pre-restoration survey focusing on the relationship between the architecture and the pictorial cycle of the Villa of the Mysteries to implement cognitive data aimed at planning scheduled post-restoration maintenance activities. As in the literature, in fact, to proceed with the project of a survey, as in this case, to be reported on the HBIM platform, the analogue phase based on the essential relationship that binds the researcher to the artefact must be followed by a verification performed with digital tools (fig. 8). The return of geo-referenced orthophotos of the monument extrapolated from the point cloud, obtained by a 3D laser scanner, was not used for the simple three-dimensional representation of the monument but is characterized as a cognitive platform (a resilient re-drawing) in which to integrate data from the multidimensionality of the knowledge constituting the artefact and from today’s innovative technologies.

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The interior of the Room of the Mysteries, with a focus on the central megalography, after the restoration © The author.

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