Originalveröffentlichung in: Rowley, Neville (Hrsg.): Donatello - inventor of the Renaissance, Leipzig 2022, S. 59-67 Online-Veröffentlichung auf ART-Dok (2024), DOI: https://doi.org/10.11588/artdok.00009280

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Donatello and the forces of sculpture

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Even Donatello's contemporaries perceived the artist's preoccupation with the specific dynamics of sculpture as a unique feature of his work. It manifests itself, for example, in the enhanced movement of bodies in space, unsurpassed in the putti frieze of the cathedral's Cantoria (\rightarrow fig. p. 55), where the wild round dance of the unpolished marble bodies passes by continuously in front of brilliant mosaic tesserae. The spatial overlapping with the rhythmically structured columns in the front creates a continuous impression of actual movement.¹ Secondly, there is a strong interrelation in many of Donatello's works between figure and framing (quadro), which can be described as the sculpture's resistance to and autonomy from its architectural surroundings. The slight rotation of Saint George around the axis of his body seems to suggest that the sculpture could leave its niche.² Early art critics interpreted the dynamis associated with this, in the literal sense of potentiality, as an expression - particularly in the case of this statue - of an extraordinary readiness to move (prontezza).³ Thirdly, sculptural dynamism also manifests itself as the power of enhanced expression that transforms the shared space of work and viewer. Such is the case of the Florentine bronze David (\rightarrow fig. p. 32), which was initially mounted in an elevated position and whose beauty demands admiration, even submission, in its pose of smiling superiority.⁴ Such spatial manipulations also commit the corresponding works to their specific location. Fourthly, many of Donatello's figures address their own gravity and thus the fundamental conditions of the sculptural medium. Figuratively, this manifests itself, for example, in the taut cushions under the distinctly ponderous Saint Mark (\rightarrow fig. p. 48), under the limp body of the inebriated Holofernes clutched by Judith, or in the fictitious mat under the niche plinth of Saint Louis. Fifthly, one might recall the novel and shocking depiction of brutal violence, seen for example in the freestanding sculptural group featuring Judith and Holofernes or in the Martyrdom of Saint Lawrence on the north pulpit of San Lorenzo.

Given that forces become such a prominent theme, it is hardly surprising that art literature has also interpreted a specific form of Donatello's sculptures in the context of dynamic influences: the extreme bas-relief. Giorgio Vasari believed that Donatello further developed archetypal designs from Antiquity (including Roman vase reliefs from Vasari's hometown of Arezzo) with unsurpassable virtuosity. In the process, Vasari coined the term that has since become common: the 'crushed' or 'flattened relief', *rilievo stiacciato* (Tuscan for *schiacciato*), a word with onomatopoeic origins.⁵ Vasari was reminded of the process of minting coins in which the blank receives a permanent imprint of the die by a hammer blow (*colpo del martello*), although the flatness of the blank reduces the force applied. Vasari thus interpreted Donatello's bas-reliefs as the result of imprinting; he also speaks of the 'dented' (*ammaccato*) relief. In addition, he referred to the reduction of the the force applied, which is due to the material's flatness.⁶

At this point, we could focus our considerations on the reception of Donatello in the late 16th century and continue with the first monograph of post-antique literary history devoted to a single work of art, Francesco Bocchi's small 1584 treatise on Donatello's Saint George. In it, too, the forces of impression play a paramount role; the metaphor of stampare recurs like a common thread throughout the three-part work. Strongly abbreviated, Bocchi's main argument is as follows: Donatello was a master of seemingly lifelike statues. Vivacità manifests itself in living human beings through impressions of feelings and passions in figures and physical gestures. Donatello was able to grasp these signs of spiritual life like no other and imprint them onto the lifeless matter of his sculptures. Therefore, these sculptures are especially suited to leave imprints in the souls of the beholders, who in turn become better human beings. Saint George thus has the power to have a direct ethical-political effect on the Florentine community. - Today, we see the same belief, ex negativo as it were, in the political impact of representational monuments in public space, although their specific artistic form has become irrelevant.

But how do we get from Vasari's strange association back to Donatello's bas-reliefs? Isn't the notion of imprinting, pressing, and denting forces the exact opposite of what these extraordinarily delicate creations present? In fact, there are only a few reliefs by Donatello in which all the figures, even those closest to the viewer, are flattened as if they were 'pressed against an imaginary optical plane'.⁷

This contradicts the traditional rounded, sometimes even fully sculptural elaboration of the figures in the foremost relief plane, a gradation that Donatello himself carries out in exemplary fashion, for example, in his Feast of Herod (1423–27) at the Baptismal Fountain in Siena (see also the Madonna in a Tabernacle from Lorenzo Ghiberti's circle, cat. 13). Another characteristic of Donatello's bassissimo rilievo (Vasari) is that the relief ground is usually no longer understood as a neutral surface in front of which representational details are placed but as a fictitious distance, i.e., as a substantially atmospheric or heavenly space or as a far-away landscape.⁸ To avoid the impression of a neutral surface – and thus the categorical leap from pictorial fiction to the factuality of the material relief ground – Donatello also worked these most distant layers of space most subtly; it is precisely here that the 'indentations' mentioned by Vasari, as minimal modulations of the marble surface, become apparent, especially when viewed from an oblique angle $(\rightarrow fig. 2)$.⁹

Therefore, research has long recognised that Donatello's *rilievi schiacciati* enable a prolongation of the depth of pictorial space previously only accessible to painting. At the same time, they expand this space to such an extent that, conversely, contemporary painting was able to draw significant inspiration from them for the representation of spatial depth. Early experiments with a systematic linear perspective construction of these spaces (e.g. in the predella of *Saint George*, \rightarrow fig. 1) are directly linked to this.¹⁰

At the same time, the reception of Donatello stressed early on that the extreme flatness of the *rilievo* schiacciato represented an approximation of sculpture to painting, or more precisely to monochrome drawing, suggesting that sculpture, too, was capable of transcending its material foundations to a large extent and appearing as pure linear art.¹¹ Indeed, towards the end of the century, Leonardo conceded that bas-relief was incomparably more 'theoretical' than sculpture (è di più speculazione senza comparazione al tutto rilevo) because, like painting, it presupposed knowledge of perspective.¹² Accordingly, Vasari frames Donatello's biography in the second version of his Vite with a twofold reference to his mastery of *disegno*.¹³ Nevertheless, it would be wrong to understand rilievi schiacciati as dematerialised 'drawings on stone', as it were, for it is precisely their minimal spatial gradations and layering, as well as their shimmering shadow lines, that constitute the aesthetic appeal of the genre.¹⁴ The difference is immediately apparent when Donatello himself inserts simple engraved drawings into his bas-reliefs, as in the Feast of Herod in Lille, where



fragmented *putti* appear in the middle ground as a 'relief within a relief'.

In the wake of the poststructuralist shift in art history since the early 1990s, some interpreters have also postulated a 'self-reflexive' aesthetic of withdrawal, even disappearance, in Donatello's *rilievi schiacciati*. This was then put into theological perspective in the same breath, as if Donatello was aiming here at practising an ultimately iconoclastic reception, for which the work served its purpose precisely when those contemplating it could leave it behind them.¹⁵ It is a longing expressed by many art historians who have an affinity for texts; nevertheless, in light of the immense sensual appeal of Donatello's bas-reliefs, this longing literally remains a pious pipe dream.

Three additional aspects deserve mention before we return to the question of the forces in Donatello's *rilievi schiacciati*; they relate to aesthetics of production, iconography and epistemology.

A few years after Donatello created his 'purest' *rilievi schiacciati*, Leon Battista Alberti devoted his small treatise *De statua* (c. 1445)¹⁶ almost exclusively to the measuring methods and the tools used for copying sculptures. Later, Leonardo would then draw on the claimed inimitability of painting to develop a paragon argument against copyable sculpture, arguing that the original was



worth as much as its imprint in terms of artistic merit (virtù).17 Since the highly successful Pazzi Madonna (cat. 14), Donatello's Madonna reliefs, in particular, were often copied in a variety of materials (terracotta, stucco, cartapesta) and usually polychromed.¹⁸ Unlike round sculptures, reliefs lend themselves to replication techniques. In the case of Donatello's rilievi schiacciati, one would expect something similar. Still, the extreme fineness of the layering, which is often less than a millimetre, guickly pushes techniques of mechanical impression to their limits. In fact, the distinction between original and copy is particularly striking in Donatello's rilievi schiacciati. In principle, these are unique pieces that lend themselves to reproduction but set each copy apart from the original in terms of quality.¹⁹ Desiderio da Settignano and Mino da Fiesole will surpass Donatello in this respect with their bas-reliefs, which are heavily incised on the body contours and for which simple casting methods are out of the question.20

Iconographically, there are astonishing parallels between Donatello's *rilievi schiacciati* and Dante Alighieri's *Divina commedia*, the most popular text in 14thand 15th-century Florence after the Bible. In the first level of Purgatorio, where the proud are purified, Dante encounters three monochrome reliefs 'of snow-white marble' carved directly into the mountain, depicting the Annunciation to Mary, 1 Donatello, *Saint George Slaying the Dragon*, predella of the niche of Saint George, c. 1417, marble, 39 × 120 cm, Florence, Museo Nazionale del Bargello

a procession with the Old Testament Ark of the Covenant and the Justice of Emperor Trajan.²¹ The figures appear as if pressed in wax (impressa [...] // come figura in cera si suggella), depicting in part large crowds of people (gente, e tutta quanta / e pieno di cavalieri). Most of all, however, Dante sees ephemeral forms in the reliefs, such as clouds of incense (fummo de li 'ncensi) or banners fluttering in the wind (l'aguglie ne l'oro / sovr'essi in vista al vento si movieno). The fascinated poet states that these completely novel reliefs do not exist on earth (novello a noi perché qui non si trova) and learns that God himself is their creator. In the eleventh Canto that follows, the pride and hubris of contemporary artists come up for discussion. The audience plays a significant role in this. In a highly topical art-critical interlude, Dante points out that Cimabue, who was praised highly only a short time ago, has since been replaced by Giotto.²² Immediately thereafter (twelfth Canto), Dante beholds on stone slabs beneath his feet representations of mainly mythological exponents of pride, often depicted in scenes of violence and despair.²³ They remind him of figurative tomb slabs, but the ingegno sottile of their creator (implicitly God again) rendered the 'shadows and strokes' with a brush or drawing tool (qual di pennel fu maestro o di stile, che ritraesse l'ombre e 'tratti); he created drawings on stone. It stands to reason that Donatello, like many Florentine artists of his time

a close reader of Dante,²⁴ must have felt challenged by this new kind of divine art in relief or stone painting. The engravings of forms in marble, which appears as soft as wax; the sculptural depiction of smoke or clouds and light textiles moving in the wind, as well as the flatness of the divine stone painting and the violent movements and passions depicted, anticipate fundamental aspects of Donatello's *rilievo schiacciato* and may have spurred an ambitious sculptor like him to probe the aesthetic limitations of the relief.²⁵

On an epistemological level, complex connections emerge between superlative sculptural flatness and the categories of time and space. As flat entities that do not become three-dimensional, even when their figures are supposed to appear closer to the eye, rilievi schiacciati manifest themselves in the mode of spatial distance; it is as if the round or even fully sculptural relief foreground has been set categorically in the distance.²⁶ Temporally, on the other hand, they refer to the past. In continuous narrative reliefs such as Donatello's Feast of Herod in Siena or Luca della Robbia's Deliverance of Saint Peter (c. 1439, Bargello, Florence), the bygone scene in the background appears flat compared to the more current, three-dimensional episode in the foreground. Since Plato (Theaetetus 191cd), philosophical-physiological as well as rhetorical teachings on memory compared the memories of past impressions localised in the brain with impressions in a block of wax or a wax tablet; over time, they gradually fade away if they are not imaginatively actualised.²⁷ In this perspective, rilievi schiacciati can be understood as figurations of the past that nevertheless refuse to be erased entirely - in contrast to worn grave slabs, medals that have been touched repeatedly, kissed Pax tablets, etc., but much like the perfectly visible paintings or drawings that Dante steps over with his feet in Purgatory.28

The last aspect brings us back to the initial question about the dynamic implications of Donatello's *rilievi schiacciati*. To recall: Vasari compares them to coins that are minted by hammer blows without too much effort because of their flatness.

Unlike his predecessors, Donatello understood the relief not only as a medium for scenic or narrative dynamics but fundamentally as a field of sculptural forces, or more precisely: of tensions.²⁹ This is particularly evident in the depictions of *putti* unrolling parchments with inscriptions and holding them stretched across the surface of the relief with visible effort (*Tomb of Baldassare Coscia* in the Florentine Baptistery and *Tomb of Giovanni Pecci* in the Siena Cathedral). But it is also evident in Donatello's use of the relief frame as a limiting device, which forces the figures to flex³⁰ or the figure composition to condense.³¹ Donatello's *rilievi schiacciati*, however, go beyond this. I recognise in them five complementary aspects of sculptural dynamism: (1) the paradigm of the artist's creative power as a metaphorical engraving of the entire relief 'in one stroke'; (2) the appeal to the power of the audience's *imaginatio*; (3) the inhibition of sculptural *prominentia*; (4) the enhancement of sculptural contrasts (*contrapposto*) in multi-part works; and (5) an experimental field for the detection of optical intensities.

(1) Vasari's metaphor of the sudden imprint of an image hardly seems to do justice to the delicate layering of the rilievi schiacciati. We imagine their creation as a careful and extremely patient process, in which, however, abrasive materials such as rubbing sand, pressed firmly onto the marble, were also used to create the 'indentations' referred to by Vasari. In fact, the corresponding works refer to a detailed workflow in which corrections are hardly possible. All the details depicted must be carefully predetermined in their spatial relation to other details. The composition takes into account not only the distribution of the objects on the surface but also their depth. Corrections here would mean deepening the bas-relief into the marble slab and thus endangering the uniform, ultra-thin layering of the bodies and objects. The principle of controlled layering thus demands an execution that is based on a prior concept or a sculptural intelligence that always keeps in mind the totality of the relief as a flat image and as a minimally three-dimensional body. Leonardo da Vinci, who was the first to formulate the rudiments of a sculpture theory, will later acknowledge that basso rilievo requires less physical effort (men fatica corporale) and more circumspective planning (maggiore investigatione) from the sculptor.³² Vasari would not hesitate to call the regulative design that precedes the execution of the rilievo schiacciato as disegno.³³ The artist's creative power - his ingegno - seems to impress the material of the rilievi schiacciati on its entire surface 'as if at once'.

(2) The design of the relief in its minimal depth thus implies the opposite of the sculptural non-finito, whose possibilities Donatello seems to experiment with only in his later works.³⁴ This positive definition of even ephemeral details such as layers of clouds, draperies, or hair is paradoxically contradicted by the process of observation prompted by the rilievi schiacciati. In particular, the increasingly fine details of the scenic horizon or the delicate veils of clouds evoke a receptive stance that still wants to catch traces of representational and physical contours in the minimal flatness. The small-format rilievi schiacciati of Donatello and his workshop, probably intended from the outset as collectors' items, particularly beckon to be moved in the light.³⁵ In the case of the larger and stationary works, this corresponds to the movement of the light source or the change of the viewer's position - a stance that Dante is explicitly invited to take in front of the divine reliefs by his guide Virgil.³⁶ The power of imagination summoned here is a force

that still seeks to recognise emergent figures and objects in something that is almost formless. Leonardo da Vinci will later famously advocate this as a productive technique 'for training the creative mind' (modo d'aumentare e destare lo 'ngegno a varie inventioni), based on immersion in formless entities (macchia) such as clouds and wet walls.³⁷ This is accompanied in Donatello's rilievi schiacciati by the need for slow, patient, predominantly close-up viewing that gradually differentiates the complex spatial layering of the highly compressed conglomerations and establishes spatial relationships between the layers. In a work such as the late Crucifixion relief in the Bargello (cat. 75), the seemingly randomly distributed, highly lustrous gold and silver stripes of the clouds and ornamental borders further and intentionally complicate the decipherment of the (now darkened) bronze surface. The figure-filled relief space, which opens up only successively, is thoroughly saturated by the viewer's imagination.

(3) Despite the comparatively 'minimal force' in their physical production and their vivid delicacy, Donatello's *rilievi schiacciati* repeatedly surprise the viewer through their interaction with the forces of sculptural protrusion and its constraint. In the description of reliefs, the

ancient and medieval semantics of eminentia and prominentia refer to a dynamic that thrusts its way forward and protrudes spatially.³⁸ Through it, the genre appears compatible with erotic and theological fields of discourse, in which the physical appearance of form is equated with beauty and virtue, respectively.³⁹ From a biological-historical perspective, one would recall the growth of the living being and thus the parallel between vitality and prominentia.40 Donatello's rilievi schiacciati deny the corporeal forms prominentia in space, but they stage this as a subtle play between antagonistic forces. An early example, the relief of the Saint George Tabernacle of Orsanmichele (c. 1417, now in the Bargello), which cannot yet be called a pure rilievo schiacciato, illustrates this (\rightarrow fig. 1). The frieze-like structure of the action does not run parallel to the relief plane but incorporates the fictive depth of space and the factual bulge of the relief. The clash between the dragon and the rider, who, riding all'antica without a saddle, firmly presses his visible left leg against the horse's body, pushes the horse diagonally into space so that its croup projects slightly towards the viewer while its head and mane seem to dissolve in flat relief. However, the action itself runs parallel to the picture plane via the lance thrust and fixes the dragon in this layer with its



2 Predella of Saint George (see fig. 1), oblique view. Photo: author



3 Donatello, Saint George in his niche (see fig. p. 58), view from below, Florence, Museo Nazionale del Bargello. Photo: author



4 Cast after Donatello, *God the Father* in the wimperg of the niche of *Saint George*, view from below, Florence, Museo Nazionale del Bargello. Photo: author

curled tail, which, in a sense, opposes the relief plane. In turn, the fierce pestilential breath of the monster blows parallel to the picture surface and causes the garments of the human protagonists to flutter open. The maximum physical force is concentrated in the most prominent limbs of the body: the horse's croup and the saint's shoulder.⁴¹ All the rest is compressed more firmly into the surface of the relief.

According to Pliny the Elder, a well-known legend recounts how the potter Butades invented the genre of sculpture by pressing clay onto the silhouette of his daughter's lover drawn on the wall.⁴² In almost all of his works, Donatello deals not only with gravitational forces but also with forces of thrust or pressure, as in the hands of Zuccone and the Beardless Prophet pressed tightly against the body or the wing of Goliath's helmet on the naked thigh of the bronze David. Thrusting forces are also evident throughout the reliefs; note the closely nestled faces of the Pazzi Madonna (cat. 14) as well as the mother's hand pressing into the buttocks of the heavy child. In the Boston Madonna of the Clouds (cat. 22), the child's hands press the mother's breast while her left hand grasps Jesus' shoulder to bulge delicately out from between her fingers.⁴³ And in the large Dead Christ Tended by Angels from London (cat. 72), the

mourning *putti* braced in the frame push Christ's head and torso into the plane of the relief, preventing him from falling into the space of the viewers.⁴⁴ In such minimal dynamics, the implicit pressure that the organisation of the bas-relief exerts on all the bodies depicted is manifested representationally. In the *Chellini Madonna* (cat. 56), a slightly convex railing implicitly prevents the bodies from protruding into real space. Conversely, the concave relief ground in the upper part of the *Saint George relief* refers to a force acting from outside, as if the marble were receding slightly into the depths like a taut skin (\rightarrow fig. 2). Analogous to the minimal degrees of tonality and the emergent colours of seemingly 'monochrome' sculptures,⁴⁵ the *rilievo schiacciato* vividly intensifies the forces of pressure and resistance precisely through their extremely subtle use.⁴⁶

(4) *Rilievo schiacciato* exhibits its latent *prominentia* mainly in the context of multi-panel sculptural ensembles. *Mezzo rilievo*, fully sculptured bodies and architectural limbs, unlike *bassissimi rilievi*, attain enhanced plasticity in a contrapposto manner. If we follow the visual attraction of the *Saint George relief* and draw close to the work, we can see the coats of arms of the commissioning armourers' guild bulging prominently out into the room on either side. Above all, however, the protruding statue of the saint suddenly looms high, its determined gaze seeming to fix an imaginary, fearsome opponent behind the viewer $(\rightarrow fig. 3)$. Only from up close does the severely lowered gaze of the once again extremely flat Christ fall comfortingly on the viewers from the enclosing tympanum (\rightarrow fig. 4). George appears as homo magnus, like a colossus, a genre in which Pliny the Elder saw the greatest challenge of art.⁴⁷ Leon Battista Alberti, who praises Donatello in the dedication of the Italian version of his treatise on painting as nostro amicissimo, contradicts Pliny: the highest level of art is not the colossus, but the painted historia, the painting of events.⁴⁸ Donatello unites both challenges in close-up conditions with his Saint George Tabernacle thus creating a contrapostal sculptural ensemble. Similarly, the monochrome rilievo schiacciato of the Entombment of Christ on the sacramental altar of Saint Peter (Rome), framed by drapery-covering putti, enhances the physicality of the fully sculptural putti.

(5) Finally, Donatello's rilievi schiacciati can also be understood as an experimental genre for modulating optical intensities and as a field of tactile vision. Their extreme dependence on light causes these reliefs to oscillate between being visible and invisible. Leonardo would later describe (uncontrolled) light as the 'mortal enemy' of basrelief (nimico capitale [...] nel poco rilevo).49 However, it is precisely here that Donatello explores the possibilities of sculpture at its limits of visibility. When he creates his purest rilievi schiacciati (around 1430), his sculptor colleague Lorenzo Ghiberti begins compiling the texts for the third of his so-called Commentarii, which deals primarily with optics. Before he deals with the physiology of the eye, Ghiberti describes – following his main source, the Arabian natural philosopher Alhazen - the 'fine sculptures' (sculture sottili) on a shallow image plane (pagina tersa). They become invisible in too strong and too weak light (llo aspiciente [...] non uedrà [...] alcuna scultura). Only in moderate light or when the viewers move (si chinerà quello corpo da quello luogo) can these delicate reliefs be perceived again.⁵⁰ Immediately afterwards, Ghiberti reports in his own words about newly discovered ancient sculptures, among them a hermaphrodite, whose sculptural delicacies (dolceze) had been so subtle that they could no longer be seen but only felt: solo la mano a toccarla la truova.⁵¹ A chalcedony (calcidonio) hid its wonders as long as one did not rotate it into the proper light: allora si uedeua perfettamente.⁵² Donatello's rilievi schiacciati are sculture sottili at the limit of perceptibility, in which the eye can experience its dependence on the intensity of light.⁵³ – Wouldn't these reliefs be suitable as a paradigm for an experimental exhibition technique in which sculpture is carefully and cautiously exposed to changing light sources and intensities?54

At the same time, Leon Battista Alberti describes the optical process of perception as a hunt in which swarming 'rays of sight' seek to seize the contours of objects with their 'fangs'.⁵⁵ Based on this, it could be said that Donatello's *rilievi schiacciati* lure the viewer's vision with the promised prey of representational figurations – and at the same time, allow this searching vision to become lost again and again with relish, not in the thicket of the forest, but the whiteout of the bright marble surfaces.⁵⁶

- ¹ Cf. Gombrich 1964, pp. 304–305; Zolli 2015, pp. 68–73. My essay was prepared under ideal conditions as the Lila Wallace-Reader's Digest Visiting Professor at Villa I Tatti, The Harvard University Center for Italian Renaissance Studies (Fiesole) in February and March 2022. My sincere thanks to the Director, Alina Payne.
- ² Cf. Poeschke 1980, p. 8.
- ³ According to Cristoforo Landino already in 1481 (prompto e con grande vivacità o nell'ordine o nel situare delle figure, le quali tutte appaiono in moto); cited in Pfisterer 2002, p. 502. On prontezza, cf. Frosini 2018; Wenderholm 2006, pp. 107–109.
- ⁴ On its display, cf. most recently F. Caglioti in Florence 2022, pp. 344–347.
- ⁵ Cf. Battisti 1968, p. 620. Ghiberti already names different degrees of plasticity in his reliefs (*hanno pochissimo rilievo*, *di poco rilievo*); cf. Freedman 1989, p. 233. At the end of the century a distinction is made between *mezzo* and *basso rilievo*; cf. *ibid.*, p. 235; Wang-Hua 1999, pp. 59, 78, 147; both with reference to Leonardo da Vinci, *Libro di pitturo* § 37 (c. 1490–92; Leonardo 1995, I, pp. 161–162). A good overview of the early history of the term can be found in Niehaus 1998, pp. 17–45; Lakey 2018a.
- ⁶ 'E questo fecero perché, se fossero state troppe di rilievo, non arebbono potuto coniarle, ch'al colpo del martello non sarebbono venute l'impronte, dovendosi imprimere i conii nella materia gittata, la quale, quando è bassa, dura poca fatica a riempire i cavi del conio.' Vasari, *Le Vite*, Introduzione, ch. X (Vasari 1550 and 1568, ed. 1966–1997, I, p. 95).
- ⁷ Rosenauer 1975, p. 96.
- ⁸ Cf. Janson 1957, II, p. 31; Rosenauer 1975, p. 80; on the historical precursors (incised drawings in the reliefs of Antelami; Lorenzo Maitani) *ibid.* pp. 117–123.
- ⁹ Cf. Pope-Hennessy 1949, p. 4.
- ¹⁰ Cf. Bennett, Wilkins 1984, pp. 138–139.

- ¹¹ 'La terza spezie si chiamano bassi e stiacciati rillevi, i quali non hanno altro in sé che 'l disegno della figura con amaccato e stiacciato rillevo.' Vasari, Le Vite, Introduzione, ch. X (Vasari 1550 and 1568, ed. 1966–1997, I, p. 95; emphasis by author).
- ¹² Leonardo da Vinci, *Libro di pittura*, § 37 (Leonardo 1995, I, p. 160).
- ¹³ The Vita of Donatello in the edition of 1568 solemnly begins: 'Donato, il quale fu chiamato dai suoi Donatello e così sottoscrisse in alcune delle sue opere, nacque in Firenze l'anno 1403. *E dando opera all'arte del disegno*, fu non pure scultore rarissimo e statuario maraviglioso, ma pratico negli stucchi, valente nella prospettiva, e nell'architettura molto stimato [...]' Vasari 1550 and 1568, ed. 1966–1997, III, pp. 201–202; emphasis by author.

¹⁴ Cf. Kanz 2010.

¹⁵ Cf. Dent 2007, p. 69 ('self-effacing'); Blake McHam 2007, p. 344 ('calculated disjunction'); Wright 2012, p. 20 ('interwoven with a range of contemporary practices, not least that of an 'ideal", immaterial, devotional contemplation'); more nuanced: Wenderholm 2018, p. 272 ('[...] thus the goal point still lying behind Donatello's relief would be the (inner, invisible) beato visio [...]'); Lange 2020, p. 340 (as a tension between 'here-and-now' and 'then-and-there').

¹⁶ Cf. Pfisterer 2007.

- ¹⁷ 'Delle scienzie imitabili. [...] Questa [meaning painting; FF] non s'impronta, come si fa la scultura, della quale tal è la impressa qual è l'origine in quanto alla virtù de l'opera.' Leonardo da Vinci, *Libro di pittura* § 8, c. 1500–1505 (Leonardo 1995, I, p. 135).
- ¹⁸ Cf. Marchand 2007.
- ¹⁹ On the implicit autograph execution of the *rilievi schiacciati*: Wilkins 2007, pp. 90–91.
- ²⁰ On Desiderio's bas-reliefs, see Penny 2007. On the comparable works of Agostino di Duccio, see Motture 2007.
- ²¹ Dante Alighieri, *Divina commedia*, Purgatorio X, 31-XXX (Dante 1991, pp. 388–391). Dante uses the term *intaglio*. On Dante's reliefs, see Tarr 1997.
- ²² Dante Alighieri, *Divina commedia*, Purgatorio XI, 94–96 (Dante 1991, p. 399)
- ²³ Ibid. XII, 16ff (pp. 402-405).
- ²⁴ Cf. Pfisterer 2002, pp. 253–254.
- ²⁵ On the transgression of the medial boundaries of the divine artist in Dante's *Purgatory*, cf. Fajen 2012–2013. With the addition of Fra Bartolomeo's monochrome *Annunciation* as side wings to the Boston or London *Madonna* reliefs (cat. 22 and 18), it becomes clear that at this moment at the latest, Donatello's *rilievi schiacciati* were seen in the horizon of Dante's paradigm; cf. Wenderholm 2018.

- ²⁶ The proportionality between distance and the optical flattening of bodies was already emphasised by Witelo (1275); cf. Lakey 2018a, pp. 131–132.
- ²⁷ Cf. Carruthers 2008, pp. 24–25.
- ²⁸ Dante Alighieri, *Divina commedia*, Purgatorio XII, 16–18 (Dante 1991, p. 403). On the emphasis on the (real or fictional) age of religious works in the Italian Trecento, see Krüger 2002.
- ²⁹ Cf. Rosenauer 1975, p. 88.
- ³⁰ See, for example, the Saint George relief (fig. 1); the Ascension with Christ Giving the Keys to Saint Peter (Victoria & Albert Museum, London, fig. p. 106), a relief that was already set in a wooden frame in the 16th century; the Madonna of the Clouds (cat. 22).
- ³¹ E.g., the Lamentation over the Dead Christ, S. Antonio, Padua. In the late pulpit reliefs of San Lorenzo, Donatello breaks completely new ground and explodes the power of the quadro; cf. the brilliant analysis by Poeschke 1980, pp. 88–93.
- ³² Leonardo da Vinci, *Libro di pittura* § 37 (Leonardo 1995, I, p. 161).
- ³³ 'Sono [i.e. rilievi schiacciati] difficili assai, attesoché e' ci bisogna disegno grande e invenzione, avvengaché questi sono faticosi a dargli grazia per amor de' contorni.' Vasari, Le Vite, Introduzione, ch. X (Vasari 1550 and 1568, ed. 1966–1997, I, p. 95).
- ³⁴ This was then taken up in some of Francesco di Giorgio's bronze reliefs since the 1470s, possibly also by Donatello's pupil Bertoldo (Orpheus, c. 1471, Bargello, Florence).
- ³⁵ Cf. Wilkins 2007, pp. 93–95; Lillie 2007. On the fascinating mutability of Donatello's *rilievi schiacciati* under changing light conditions, see Droth 2004, pp. 30–32.
- ³⁶ '[...] mi mossi col viso [...] da quella costa / onde m'era colui che mi movea [...]' Dante Alighieri, *Divina commedia*, Purgatorio X, 49–51 (Dante 1991, p. 388). Cf. Lakey 2018b, pp. 143–145. On Donatello's anticipation of moving viewers, see Munman 1985.
- ³⁷ Leonardo da Vinci, *Libro di pittura* § 66 (Leonardo 1995, I, pp. 177–178, cf. § 189).
- ³⁸ Cf. Freedman 1989, p. 241, Wang-Hua 1999, p. 27.
- ³⁹ Cf. Quiviger 2007, p. 176, Lakey 2018b, pp. 158–159.
- ⁴⁰ On the Aristotelian theory of embryonic growth, cf. Föllinger 2010.
- ⁴¹ On the shoulder of the saint lies also the vanishing point of the loggia on the right; cf. Wilkins 2007, p. 83.

- ⁴² '[...] quibus pater eius inpressa argilla typum fecit et cum ceteris fictilibus induratum igni proposuit.' Pliny the Elder, *Naturalis historia* XXXV, 151 (Pliny, ed. 1973–1996, XXXV, p. 114).
- ⁴³ Cf. Quiviger 2007, p. 185.
- ⁴⁴ The angel on the right seems at the same time to be desperately groping for the heartbeat of the Saviour, while the fold on Christ's slumped chest is identical to the hidden side wound; this detail alone already speaks for the attribution of at least the design to Donatello.
- ⁴⁵ Cf. Fehrenbach 2021, pp. 121–155.
- ⁴⁶ The classical comparison of pushing and pulling forces is found in Aristotle, *Physics* VII, 243a–244a.
- ⁴⁷ Pliny the Elder, Naturalis historia XXXIV, 41 (ante omnes autem in admiratione fuit solis colossus Rhodi [...]; Pliny, ed. 1973–1996, XXXIV, p. 38).
- ⁴⁸ 'Maior enim est ingenii laus in historia quam in colosso.' Leon Battista Alberti, *De pictura* II, 35 (Alberti 2000, p. 256).
- ⁴⁹ Leonardo da Vinci, *Libro di pittura*, § 37 (Leonardo 1995, I, p. 161).
- ⁵⁰ Ghiberti 1988, pp. 22–24.
- ⁵¹ Ibid. p. 28.
- ⁵² Ibid. pp. 34, 36.
- ⁵³ Nicole Oresme, in his commentary on Aristotle's treatise on the soul (mid-14th century), attributes the optical relief (protruding parts appear brighter than those further back) to the fact that light falls 'intensely' (intensus) on the eye from there; cf. Lakey 2018a, p. 133. When the physician Giovanni Chellini refers to the fact that glass could be poured into the back of the Madonna relief that Donatello had given him (now at the Victoria & Albert Museum, London, cat. 56) in order to make replicas, he is probably quoting Donatello himself. The transparent product takes the physicality of the relief to an extreme, where light and (almost shadowless) matter become one. On the Chellini Madonna, see Dale 1995.
- ⁵⁴ A related approach is adopted by the 'Monza Method' of the lighting designers Serena Tellini and Francesco lannone; it deals primarily with changing light temperatures (https://z.lighting/ en/group/news-insights/monza-method; last accessed on 8 April 2022).
- ⁵⁵ 'Caeterum ii radii extremi dentatim universam fimbriam superficiei comprehendentes [...]' Leon Battista Alberti, *De pictura* I, 7 (Alberti 2000, p. 204). Regarding the topos of seeing as hunting and its elaboration by Leonardo da Vinci, see Borgo 2017.
- ⁵⁶ Cf. Wenderholm 2018, p. 271 (a glistening bright, polished marble surface).
- Translated from German by Erik Lloyd Dorset.