PHILOSOPHICAL TRANSACTIONS OF THE ROYAL SOCIETY B BIOLOGICAL SCIENCES

Ritualized Gesture and Expression in Art

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Ritualized gesture and expression in art

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[Plates 14 to 19]

I hope I may dispense with the ritual of an introduction and plunge *in medias res* with the aid of my first illustration, an anti-war poster of 1924 by the German expressionist artist Kaethe Kollwitz (figure 1, plate 14). It shows the various aspects of gesture and expression I should like to single out for discussion. The young man on the poster surely exhibits those symptoms of mass emotion that Konrad Lorenz has recently analysed so convincingly in the penultimate chapter of his book on aggression (Lorenz 1963), the heightened tonus, the rigid posture, the raised head with the forward thrust of the chin, even the bristling hair, all the physical reactions that accompany the emotion of mass enthusiasm or *Begeisterung*. If we retain the term *symptom* for these visible signs the artist has here represented, we may use the term *symbol* for the other kind of visible sign, the gesture of the hand with its two outstretched fingers which conventionally accompanies the swearing of an oath in central Europe, a ritual in the narrow cultural sense of the term. If natural symptom and conventional symbol can be seen as the two extremes of a spectrum (Gombrich 1963*b*) we would, I believe, have to place the gesture the young man performs with his left hand somewhere in between these extremes. The hand on the heart is a widespread gesture of sincerity and protestation that has even become a formula in German speech, *Hand aufs Herz*. English is more specifically ritualistic here, with 'cross my heart', a formula that neglects the symptomatic element of the hand gripping the heart in one of those autistic gestures (Krout 1935; Wolff 1945) indicative of stress, reinforced, perhaps, by the feeling of the heartbeat that accompanies a 'heavy heart'. But as so often with physical symptoms of emotions, these are still subject to conscious control, they are sufficiently plastic to be moulded by cultural traditions (Kris 1952). Few of us, for instance, would seriously make this gesture, for in our anti-rhetorical culture it would suggest hamming. Within the context of a political poster, of course, understatement would be out of place and the hand on the heart is effective enough. And so—to turn to the other elements of gesture, that concern the student of art, are the traces of the artist's own emotional state, what might be called the graphological aspect (Gombrich 1963*a*). This element can be seen to modify and transform the conventional symbols of lettering: '*Nie Wieder Krieg*' (No More War) is obviously written in the same state of tension that we see in the face of the young man. The underlining mounts to a crescendo, as would the voice of the man pronouncing his oath, and the writing contrasts altogether with the script imparting factual information below. Needless to say this distinction between emotive symptom and conventional symbol as ends of a spectrum is an abstraction, the symbolic ritual of oath taking is charged with all the symptoms of the emotion both in the way the upraised arm is tautened and the way it is drawn with emphatic strokes.

But if we can agree on some such distinction we may find it easier to discuss their interaction in art and in life. For the representational element of art, of course, mirrors life at least up to a point. It makes use of gestures that have their meaning in human intercourse. The gesture of the oath is quite an interesting case (Künssberg 1941). It is so represented in a German legal manuscript of the fourteenth century (Amira 1909, 1926) where the swearing fingers touch the holy relic upon which the oath is taken (figure 2, plate 14). But the position of the fingers is not specific to the oath. We all know it as the Christian gesture of blessing (Cabrol 1910) exemplified by the majestic painting of God the Father from the Ghent Altar Piece (figure 3, plate 15). The gesture here is more relaxed, of course, than that of the oath on the expressionist poster, but its very calm adds to the impression of a gesture of power.

Originally this position of the fingers signified neither blessing nor the oath. It accompanied any more solemn spoken announcement and belongs to the repertory of movements recommended by ancient teachers of rhetoric (Sittl 1890; Paradisi 1962). In medieval narrative art it comes therefore to function simply as a 'speaking gesture'. An Ottonian miniature (figure 4, plate 15) shows Christ thus explaining to St Peter the new ritual of washing the feet, illustrating the account in the Gospel of St John (xiii, 8, 9), 'Peter saith unto him, Thou shalt never wash my feet. Jesus answered him, if I wash thee not, thou hast no part with me. Simon Peter saith unto him, Lord, not my feet only, but also my hands and my head'. His eloquent gesture recalls once more the range between the symbolic and the more spontaneously expressive, the 'initiated action' of the apostle, grasping eagerly what he is offered. Perhaps it is in considering the difference between these gestures that we can also come nearer to explaining the peculiar speaking gesture—it may be described as a gesture of unambiguous non-action, the hand is immobilized and can neither grip nor push. We still used this conventional speaking gesture of '*aufzeigen*' at school in Vienna, when we wanted to signify that we wished to speak.

Its most important distinctive feature is the raising of two fingers, which renders it more artificial but also more humble and innocuous than the pointing hand (Tikkanen 1913) which indicates a degree of emphasis that can be unbecoming. The *Baptist* can use it with his stark message on the Isenheim Altar (figure 5, plate 15), or the *Revolutionary* in his shrill didacticism (figure 6, plate 15), but children are still taught, I believe, that pointing is rude, because in some form it implies a command, a sign of dominance universally understood.

The speaking gesture, by contrast, which accompanied solemn pronouncements and thus survived at least up to this century in the specialized rituals of the oath and the blessing is certainly part of a particular tradition, a symbol of a gesture language. The literature about these languages, alas, is patchy and undeveloped.* I would not know, for instance, where to look for information about the frequency in real life of that other gesture of the *hand on the heart*. As an historian of art I know it as a formula in a particular tradition, that of Western religious art (Lange 1887; Mander 1618, vi, 45) (figures 7, plate 16 and 13,

* An indispensible foundation was laid by Bühler (1933) who traced the history of these studies from ancient rhetorics to Darwin and established a link with the theory of language. Whether Birdwhistell's attempt to develop a new terminology and notation for the analysis of bodily movements in a new science of 'Kinesics' will bear fruit it is still too early to say.

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FIGURE 1. Kaethe Kollwitz, anti-war poster, 1924.

FIGURE 2. Swearing on the relic, and oath of allegiance, from the manuscript of the *Sachsenspiegel*, fourteenth century, Dresden (after Amira, *Der Dresdener Sachsenspiegel*, 1902, pl. 15).

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FIGURE 3. God the Father, from the Ghent altarpiece by the brothers van Eyck, early fifteenth century. (Copyright A.C.L. Brussels.)

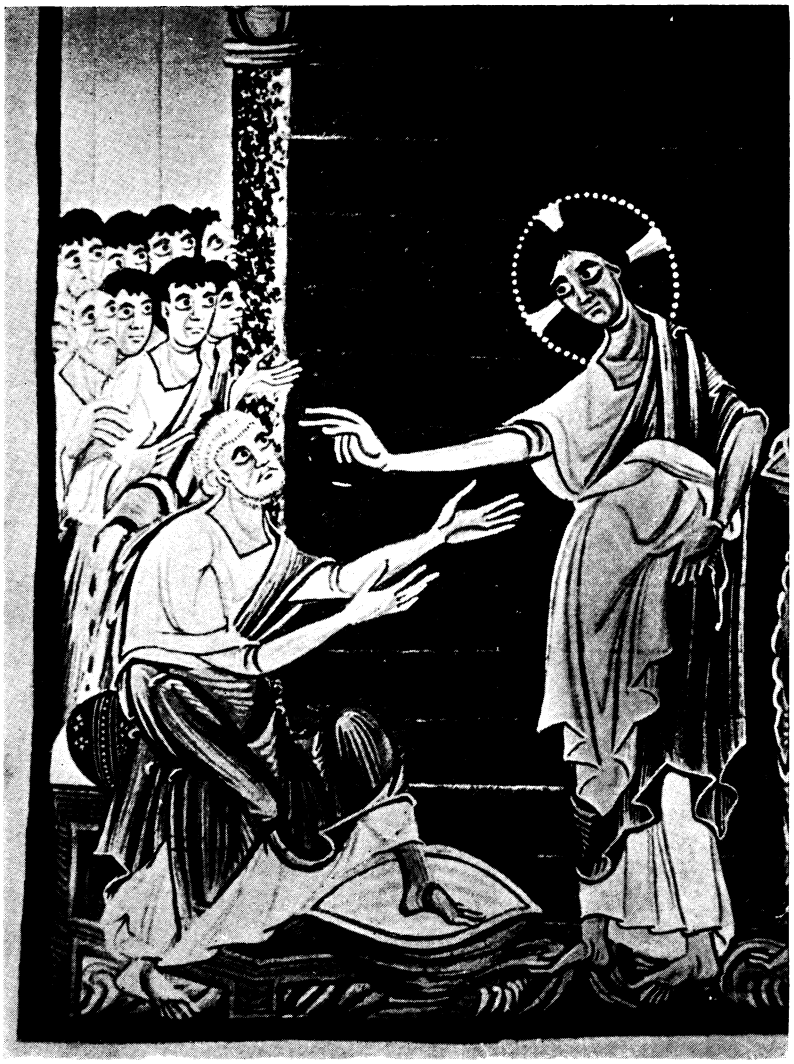

FIGURE 4. The washing of the feet, from a Gospel Book of Otto III, German, *ca.* 1000, Munich, Staatsbibliothek.

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FIGURE 5. St John the Baptist, from the Isenheim altar by Mathias Gruenwald, *ca.* 1515, Colmar. (Photo Marburg.)

FIGURE 6. Lenin, anonymous Russian poster, *ca.* 1920. (After Polan *The Revolutionary Poster.*)

plate 17). I doubt if it occurs with quite the same meaning in either ancient or Eastern art.

This raises the whole vexed question of the relation between the gestures we see represented in art and those performed in real life.* It is a vexed question for two reasons, one because in many cases art is our principal source of information about gestures and secondly because art arrests movement and is therefore restricted in the gestures it can show unambiguously (Gombrich 1964). You cannot paint even the shaking of the head we use in the West for 'no'.

One thing is certain, there were great periods in art when artists considered it their task to make the figures of their painting speak through gestures. Dante describes the rendering of certain scenes he sees in Purgatory as *visibile parlare* (*Purgatorio* x, 95), visible speech, because the attitude of the figures so clearly expressed their mind, and Leonardo da Vinci never ceased urging that, as he put it, in the *Trattato della pittura* (McMahon 1956) 'the most important in painting are the movements originating from the mental state of living creatures, the movements, that is, appropriate to the state of...desire, contempt, anger or pity...' (fol. 48). He advises artists to 'take pleasure in carefully watching those who talk together with gesticulating hands, and get near to listen what makes them make that particular gesture...(fol. 125). He even goes so far to advise studying deaf-mutes who have no other means of communication (fol. 46).

I scarcely need illustrate his Last Supper in which the reaction of the Twelve Apostles is shown to Christ's announcement of the impending betrayal, a painting which none other than Goethe retranslated into a masterly dramatic dialogue (Goethe 1817). Nor do I want to dwell too long on this famous example, beyond saying that clearly Leonardo made use of that intermediate range of gestures that lie between the spontaneous symptom of emotions and the conventionalized. It has always been felt that these are typically Mediterranean gestures, the protestation with hands towards the breast, the horror of shrinking back, the warding off with upraised hands, but clearly even these could not convey their meaning in the context if we did not know the Gospel story. The likelihood, moreover, that even in the Mediterranean such an announcement would result in such configuration is small, despite the attempt in the recent film *La Viridiana* to make it come to life among a group of beggars.

Yet with great respect to Leonardo and the academic teachers who have followed him in his incessant advice to the artist to study life in the raw, it seems to me that observation alone would never have resulted in such works. Life in movement is just too rich and too manifold to allow of imitation without some selective principle. Random snapshots of people in random situations could never have given us that narrative art that was considered the artist's highest task. I admit that I am biased here. For I have also argued in another context, in my book on *Art and illusion* (Gombrich 1960) that the painter's starting-point can never be the observation and imitation of nature, that all art remains what is called conceptual, a manipulation of a vocabulary, and that even the most naturalistic art generally starts from what I call a schema that is modified and adjusted till it appears to match the visible world.

* The complexity of this relationship has certainly been underrated by Riemschneider-Hoerner (1939) who wants to trace the stylistic cycles of gestures through art and literature.

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I should like to propose as my principal hypothesis that as far as gesture is concerned the schema used by artists is generally pre-formed in ritual and that here as elsewhere art and ritual, using the word in its narrow cultural sense, cannot easily be separated.

Within the context of this symposium, the transition from action to ritual and hence into art can perhaps be followed in an age-old formula, that for triumph which shows the victorious ruler trampling on his defeated foe, as on this Mesopotamian Stele of Naram Sin (figure 8, plate 16). I am afraid this is not artistic licence. I remember reading that even in Byzantium the ritual of triumph sometimes included the barbarous ceremony of the Emperor publicly setting his foot on the neck of the vanquished ruler. Art, I am sorry to say, preserved this gesture ritual domination even beyond its natural life. Many monuments to victorious heroes like Balthasar Permoser's statue of Prince Eugene of Savoy (figure 9, plate 16) show the general setting his foot or his knee on the writhing body of the defeated, no doubt with the lingering feeling that the perpetuation of the humiliation will also perpetuate the victory. Even within the realm of spiritual conflict this ritualistic image is preserved as in a fresco by Filippino Lippi in Rome, where it is St Thomas Aquinas (figure 10, plate 16) who is shown trampling victoriously on that arch-heretic Averroes with whose interpretation of Aristotle he disagreed.

Such extremes, admittedly, leave not much room for gesture in the stricter sense of the word, but the preceding stage of a ritualized gesture of submission is even more frequent in art, contrasting the victorious hero with the defeated foe who sues for mercy or expresses otherwise in his attitude all the signs of self-humiliation. In Roman art this contrast between authority and submission is such a leading theme that a long book has recently been published with the significant title *Gesture and rank in Roman art* (Brilliant 1963). The place in the pecking order of a military society is clearly visible in the relationship of postures and gestures that befit the leader and the led. Needless to say, this ritualized relationship of command and submission is also capable of spiritualization. The stereotyped gesture of surrender which displays the helplessness of the vanquished who 'throws up his hands' in an appealing movement showing him unarmed and incapable of further aggression (figure 11, plate 16) is also the most important source of gestures of worship and prayer before the Godhead. Indeed the representation of a barbarian with upraised hands in the Bibliothèque Nationale (figure 12, plate 17) has been described as surrendering by Brilliant and as praying by Ohm (1948).

Description of plate 16

Figure 7. Detail from the assumption and coronation of the Virgin, by Raphael, *ca.* 1503, Vatican Museum. (Photo Anderson.)

Figure 8. Monument to Naram Sin, detail, twenty-third century B.C., Paris, Louvre. (Photo Gallimard.)

Figure 9. Apotheosis of Prince Eugene of Savoy, by Balthasar Permoser, 1718–1721, Vienna, Oesterr. Galerie.

Figure 10. St Thomas Aquinas, detail of a fresco by Filippino Lippi in S. Maria sopra Minerva, Rome, 1488–93. (Photo Anderson.)

Figure 11. Surrendering barbarian, coin of Trajan, early second century A.D., British Museum.

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FIGURE 7

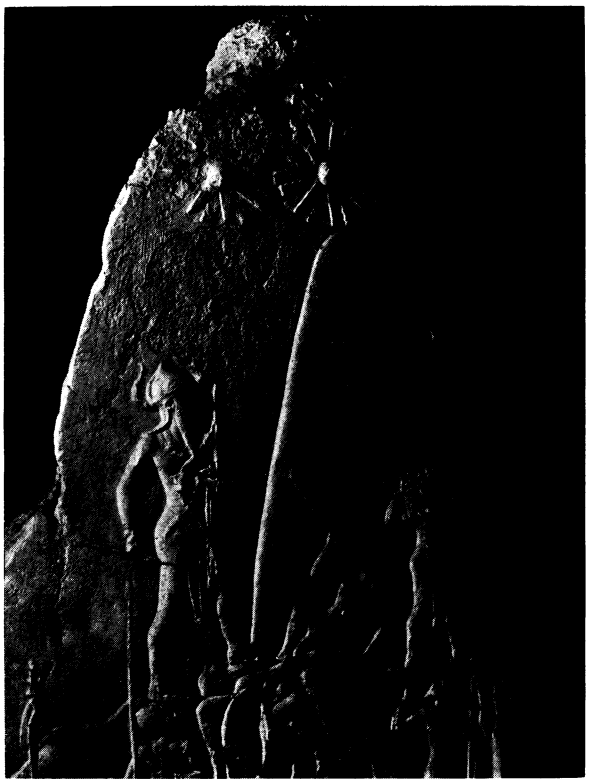

FIGURE 8

FIGURE 9

FIGURE 10

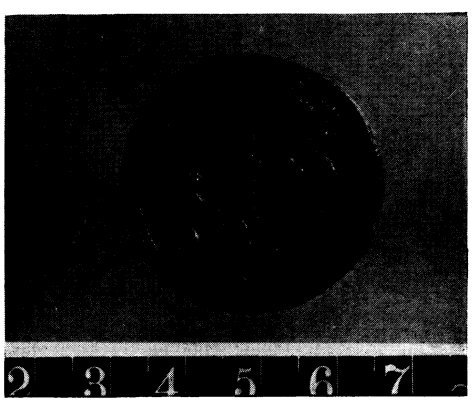

FIGURE 11

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FIGURE 12. Statuette of a barbarian, Roman, early Imperial, Paris, Bibliothèque Nationale.

FIGURE 13. Tomb of Sir Henry Norris, detail, by an anonymous sculptor, 1603, Westminster Abbey, London.

FIGURE 14. The Virgin as a child, by Zurbaran, *ca.* 1630, New York, Metropolitan Museum.

FIGURE 15. David in prayer, etching by Rembrandt, 1652, British Museum.

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No doubt the gesture of praying with folded hands also belongs into this category. Its evolution and transformation really parallels the process of ritualization that is the subject of this symposium, because few who use it today will think of the original purpose of this sign of surrender, delivering oneself more or less 'bound hand and foot', or at least ready to be bound without offering resistance. In India the origins of this gesture are lost in the distant past, but it appears to have been unknown to classical antiquity and even to the early Christians who still prayed with upraised hands. It has been suggested that its gradual ascendency in the Middle Ages was due to the influence of the feudal ritual of the oath of allegiance in which the liegeman placed his folded hands between those of his Lord, an act of submission that is illustrated in Legal manuscripts and is still performed at graduation in Cambridge (figure 2, plate 14). Isolated representations of figures praying with folded hands can be found in Western art since about A.D. 1000*, but at least one authority traces its more general adoption to St Francis of Assisi who may have inspired its incorporation in the ritual of the Mass (Ladner 1961). Be that as it may, from the thirteenth century on innumerable images of Saints, donors and worthies perpetuate the act of submission in ecclesiastical art on tombs (figure 13, plate 17), altars and illustrations. To us, its original meaning has merged with the general expression of a mood. The folded hands evoke the atmosphere of piety and contemplation that transcends a narrow ritualistic interpretation (Ollendorf 1912). Owing, however, to the association of prayer with a request to the deity, the gesture also has become one of begging in central Europe (Flach 1928). Small children are taught in Austria to accompany their '*bitte*' ('please') with a movement of the hands that is known to develop into impatient and insistent clapping—the final change from submission to the signalling of a demand. As far as art is concerned the very frequency of the gesture allows us to illustrate the difference between the cheapened formula that can embarrass us in devotional art (figure 14, plate 17) and the way a great artist such as Rembrandt can mysteriously restore its original validity in his wonderful etching of David in prayer (figure 15, plate 17).

I here come to the second point I wanted to make in this brief survey. Important as are the areas of contact between ritualized behaviour in animal and man, and far reaching as is their bearing on a study of art, I could not agree to an equation of that discharge of emotion that occurs in ritual with the motivations of human art. Whatever may be true of so-called primitive societies where art may mainly serve the canalizing of collective emotions, for the individual in our kind of society the ritual is not only a help but also a hindrance in that discharge. We may be happy in the ritual of applause at the end of a lecture or concert, but when we stand face to face with the performer we are bothered to hear everyone say, 'thank you for a most interesting lecture'. We are, precisely because it is a ritual and we know that it is performed after good and bad lectures alike. We try as we approach the lecturer to make our voice more charged with symptoms of sincere emotions, we press his hand in raptures, but even these tricks are quickly ritualized and most of us give up and lapse into inarticulacy. It takes a Rembrandt, or, on a lower level, a Kaethe Kollwitz to repeat a ritualized gesture in a way that is felt to be charged with genuine expression, not *only* a ritual, but a symptom as well.

* I am indebted for this information to Dr A. Heimann.

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I suspect that animals are rarely plagued by this feeling of inadequacy when they perform a ritualized act of submission or ingratiation. For animals probably lack that distinctly human achievement, the lie. The Judas kiss, the use of a ritual of love as a signal of aggression is not within its range. What we mean by expression in human behaviour and particularly human art implies some kind of correspondence between inwardness and outward sign. How often have not religious leaders and reformers decried ritual when they found this correspondence wanting, how often have not critics done the same. In the study of animals I am sure this very distinction would be invalid. Professor Lorenz rightly insists that for the goose the friendship ritual *is* the friendship. We cannot separate the behaviour and its inwardness, as it were. Even in man, I believe, that duality has its limits. There is surely much truth in the James-Lange theory which stresses the extent to which behaviour reacts back on the emotions. It may really be difficult to 'smile, and smile, and be a villain', or to feel sad while performing a gay dance; difficult, but it can be done.

And yet no student of art, I think, should neglect this more complex relationship that exists in human society between emotion and its expression. I may here take for an illustration the most typical ritualized behaviour that certainly influenced the language and conventions of art, I mean the ritual of mourning the dead. It both sums up my hypothesis about the roots of expressive gesture in ritual, and illuminates the complexities of the situation.

It comes perhaps as a surprise to encounter so vivid an expression of emotions within the rigid conventions of Egyptian art (figure 16, plate 18), even though the relief dates after that period of Egypt in the eighteenth dynasty in which these restraints were much relaxed in the El Amarna revolution. Even so it is relevant to both my themes that what we have in front of us is not so much a symptom of personal grief as its enactment in the ritual of wailing that plays such a part almost everywhere in primitive societies, in the discharge of emotions (Martino 1958). Wailing women are still hired for the purpose of such rituals in the Middle East to increase the lament. The tearing of hair, the scattering of ashes, the mutilations of garments and even of the body, all these are the appropriate ritual that not only expresses but produces the emotion. I suppose a good wailing woman learns to experience the grief she is paid to express and so does the artist who perpetuates the wailing in stone. But what matters is not his feeling but his awareness of the ritual. Now one gesture of mourning we see on the Egyptian relief, the heavy head supported by the hand, carried over into Greek art (Brauer 1934), as in the famous Sidonian sarcophagus (figure 17, plate 18) where the wailing women are perpetuated in stone in a timeless lament. The figure on the right with her head on the hand prefigures the ritualized gesture of mourning that entered the vocabulary of medieval art (Morgenstern 1921), belonging to

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DESCRIPTION OF PLATE 18

FIGURE 16. Relief from the tomb of a priest, Egyptian, nineteenth dynasty, East Berlin, Staatliche Museen.

FIGURE 17. Sidonian sarcophagus, mid-fourth century B.C., Istanbul.

FIGURE 18. Crucifixion, Byzantine ivory, tenth century, Berlin-Dahlem, Staatliche Museen.

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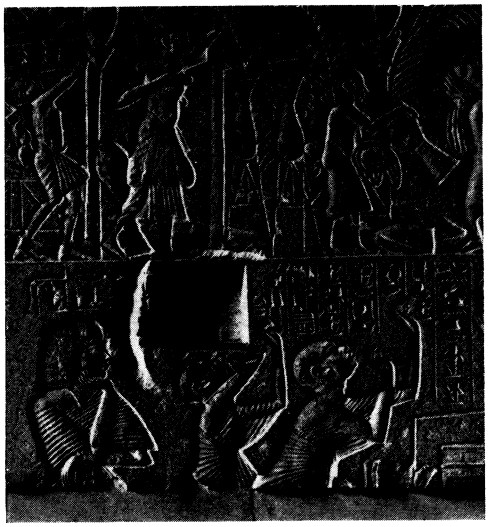

FIGURE 16

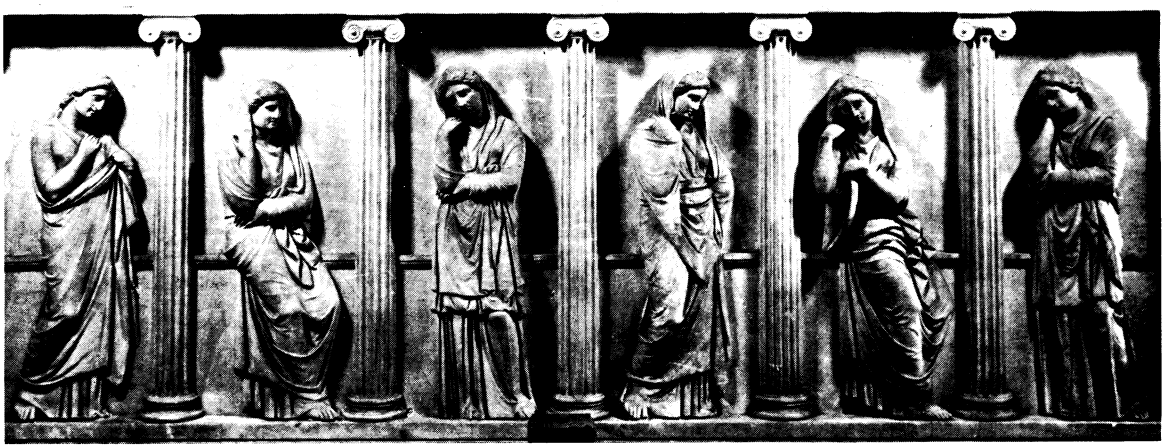

FIGURE 17

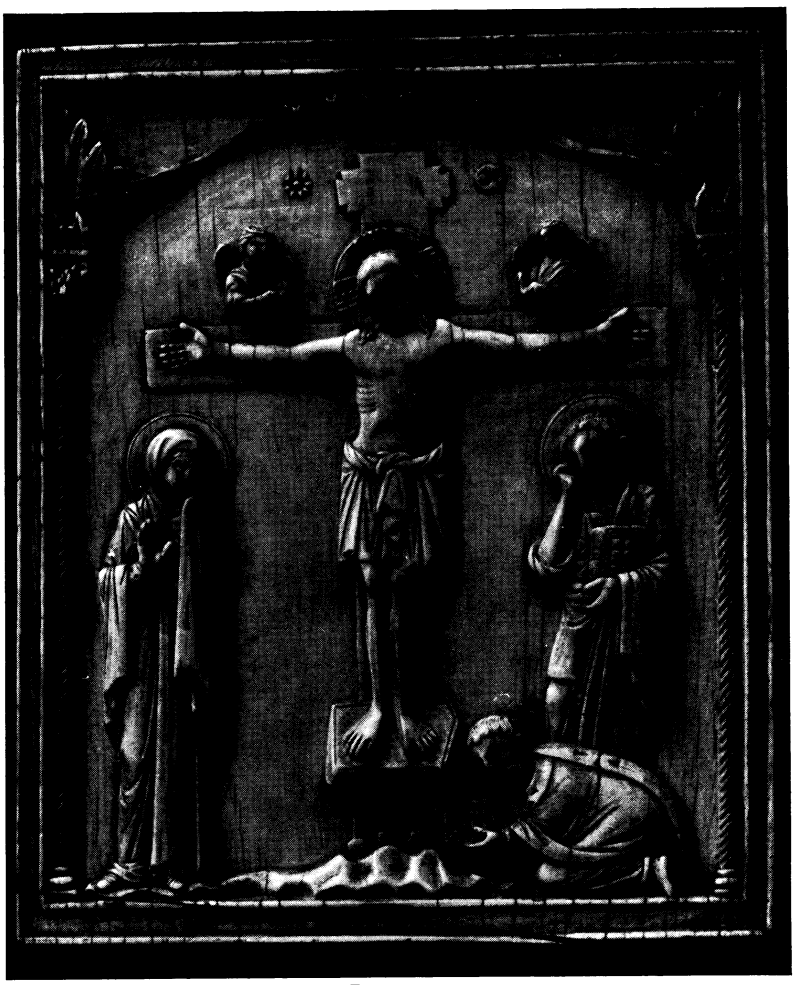

FIGURE 18

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FIGURE 19. A mourning woman under the Cross, from the pulpit relief by Donatello, *ca.* 1460–70, S. Lorenzo, Florence. (Photo Alinari.)

FIGURE 20. Dionysiac revels, Roman Imperial relief, Vatican Museum. (Photo Anderson.)

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the Virgin and St John under the Cross, as on Byzantine medieval ivories (figure 18, plate 18).

Clearly it needs a real artist to recharge such a formula with emotion, to attune the whole body and tonus, the colour and composition to the expression of grief that is part of the ritual. Donatello's reliefs on the San Lorenzo pulpits are a sublime example of that intensity of emotion that expresses itself in these gestures of abandon (figure 19, plate 19).

It was the conviction of Aby Warburg, the founder of the Warburg Institute, that this new feeling for the language of the body, its expressiveness in extremes was in itself engendered through fresh contact with the monuments of ancient ritual, the representations of the Dionysiac thiasos with its maenads dancing in ecstatic frenzy* (figure 20, plate 19). Warburg was certainly right that these renderings of a ritual were much admired and studied by Renaissance artists trying to penetrate the language of emotive symptoms (Clark 1956). He was also right in stressing the dangers that arose in art through an inflation of these gestures, that crescendo of frenzied gesticulation that characterizes some of the Baroque. It was an inflation that inevitably produced the reaction of a return to the gold standard of classical restraint, the taste of our generation for Piero della Francesca's calm.

Aesthetic problems of this kind are usually treated by critics under the categories of 'sincere' versus 'theatrical' expression. I am not sure that this is right. Both the rhetorical and the anti-rhetorical, the ritualistic and the anti-ritualistic are in a sense conventions. Indeed what else could they be, if they are to serve communication between human beings?

I have left myself very little time to apply these findings, such as they are, to the situation in contemporary art and criticism which shuns any ritual except, perhaps, the ritual of father killing, and which still is left with the dilemma of expression and ritual unsolved. It matters little that it is no longer the gesture in narrative contexts that is the problem but that graphological gesture to which I drew your attention at the outset, that alleged symptom of the artist's emotion that is discharged in the brush-stroke of an artist such as Van Gogh with his magnificent flaming lines.

Today it is this gesture trace that is to carry expression, according to a theory of painting that is itself not uninfluenced by the more ritualistic philosophy of Chinese calligraphy. Tachism and Action Painting, if I understand these movements, have made a ritual of Dionysiac frenzy in the throwing and pouring of paint as a sign of ecstasis. But like all purely expressionist theories the theories of abstract expressionists were caught in the dilemma to which I referred before, the dilemma of being human and being aware of what others do. It may have been liberating for Jackson Pollock to break all bonds and pour his paint on the canvas, but once everybody does it, it becomes a ritual in the modern sense of the term, a mere trick that can be learned and gone through without emotion. In trying to avoid this dilemma we get anti-art and anti-anti-art, till we are all in a spin of ritualistic innovation for its own sake. The dilemmas that underlie this crisis are real enough, I believe. We cannot return to the anonymous ritual of mass emotion as we are enjoined to do on the other side of the Iron Curtain. But we can, I hope, face these issues

* Warburg's remarks on this subject, scattered through his *Gesammelte Schriften* (1932) can best be traced through the Index s.v. *Antike, Nachleben: Wirkungen*. I hope to present these theories in more systematic form in a book based on Warburg's published and unpublished writings.

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and learn from the study of behaviour that neither the total sacrifice of conventions nor the revival of collective ritual can answer the needs of what we have come to mean by art.

Following a promise made during the discussion I have attempted here to assemble a bibliography of gesture including items not immediately relevant to my paper. I have not included the more technical literature on acting, modern dancing and the rendering of expression in art which concentrates on facial expression. Where titles are not self-explanatory I have briefly indicated the subject in parentheses. The abbreviation 'bibl.' marks publications especially rich in references that can take the reader further.

References (Gombrich)

Amira, K. 1909 Die Handgebärden in den Bilderhandschriften des Sachsenspiegels. *Abh. bayr. akad. Wiss.* (*philos.-philol.*) **23**, 163–263. (Medieval German law, bibl.)

Amira, K. 1926 *Die Dresdener Bilderhandschrift des Sachsenspiegels*. Leipzig: Hiersemann.

Birdwhistell, R. L. 1955 Background to Kinesics, *Etc. Rev. Gen. Semantics* **13**, 10–18.

Brauer, E. H. 1934 *Studien zur Darstellung des Schmerzes in der antiken bildenden Kunst Griechenlands und Italiens*. Breslau: Nischkowsky.

Brilliant, R. 1963 *Gesture and rank in Roman art*. (*Mem. Conn. Acad. Arts Sci.* **14**.)

Bruyne, L. de 1943 'L'imposition des mains dans l'art chrétien ancien. *Riv. arch. cristiana* **20**, 113–266.

Bühler, K. 1933 *Ausdruckstheorie, Das System an der Geschichte aufgezeigt*. Jena: Fischer. (History of the subject, bibl.)

Cabrol, F. 1910 Bénir. In *Dictionnaire d'Archéologie Chrétienne*. Paris.

Chomentovskaja, O. 1938 Le Comput Digital. *Gaz. Beaux-Arts* **20**, 157–172. (The gesture in art.)

Clark, K. 1956 *The nude*. London: J. Murray.

Coomaraswamy, A. & Gopālakrishnāyya, D. (trans.) 1936 *The mirror of gesture, being the Abhinayada darpana of Nandikeśvara*. New York: Weyhe.

Critchley, M. 1939 *The language of gesture*. London: E. Arnold and Co. (Survey, references.)

Dale Saunders, E. 1960 *Mudra. A study of symbolic gestures in Japanese Buddhist sculpture*. New York: Pantheon.

Efron, D. 1941 Gesture and environment. *A tentative study of some of the spatio-temporal behaviour of Eastern Jews and Southern Italians*. New York: King's Crown Press.

Flach, A. 1928 *Die Psychologie der Ausdrucksbewegung*. Wien: Gerold and Co. (Experimental.)

Flachskampf, L. 1938 Spanische Gebärdensprache. *Romanische Forschungen* **52**, 205–258 (Anthrop. bibl.)

Frenzen, W. 1936 *Klagebilder und Klagegebärden in der deutschen Dichtung des höfischen Mittelalters*. Bonner Beiträge zur Deutschen Philologie, Heft 1. Würzburg: Triltsch.

Goethe, J. W. 1817 Joseph Bossi über Leonardo da Vinci's Abendhmahl. First published in *Über Kunst und Alterthum* I, **3**, 113–188.

Gombrich, E. H. 1960 *Art and illusion*. New York and London: Pantheon and Phaidon Press.

Gombrich, E. H. 1963*a* Achievement in mediaeval art. In *Meditations on a hobby horse*. London: Phaidon Press.

Gombrich, E. H. 1963*b* Expression and communication. In *Meditations on a hobby horse*. London: Phaidon Press.

Gombrich, E. H. 1964 Moment and movement in art. *J. Warburg and Courtauld Inst.* **27**, 293–306.

Grajew, F. 1934 Untersuchungen über die Bedeutung der Gebärden in der griechischen Epik (Freiburg Dissertation). Berlin.

Habicht, W. 1959 *Die Gebärde in englischen Dichtungen des Mittelalters*. (*Abh. bayr. Akad. Wiss.* (*philos.-hist.*)) (N.F.) **46**.

Jucker, I. 1956 *Der Gestus des Aposkopein*. Zurich: Juris. (Ancient art and ritual.)

Kiener, F. 1962 *Hand, Gebärde und Charakter*. München-Basel: Reinhardt. (Psych. bibl.)

PHILOSOPHICAL TRANSACTIONS OF THE ROYAL SOCIETY B BIOLOGICAL SCIENCES

Kris, E. 1952 Laughter as an expressive process. In *Psychoanalytic explorations in art*. New York: International Universities Press, Inc.

Krout, M. H. 1935 *Autistic gestures, and experimental study in symbolic movement*. (*Psychological Monographs* **46**, 4.)

Künssberg, E. 1941 *Schwurgebärde und Schwurfingerdeutung*. Freiburg i. Br.: Herder.

Ladner, G. B. 1961 The gestures of prayer in papal iconography of the thirteenth and early fourteenth centuries. *Didascaliae. Studies in Honor of Anselm M. Albareda* (ed. Sesto Prete), pp. 247–275.

Lange, J. 1887 Handen paa brysted. *Tilskueren* **4**, 455, 570. (Art.)

Lange, J. 1900 *Die Geschichte eines Ausdrucks*. Leipzig: Jacobsen. (Upward glance, art.)

Lorenz, K. 1963 *Das sogennante Böse*, Vienna: Dr G. Borotha-Schoeler.

Mander, C.V. 1618 *Schilder Boeck*. Amsterdam: J. Pieters Wachter.

Martino, E. de 1958 *Morte e pianto rituale nel mondo antico*. Torino: Einaudi. (Ancient art, anthrop. bibl.)

McMahon, A. P. (ed.) 1956 *Leonardo da Vinci, treatise on painting*. Princeton: University Press.

Morgenstern, L. 1921 *Die Ausdrucksbewegung des Schmerzes in der Christlichen Kunst bis zum Ausgang der Renaissance*. (*Studien zur deutschen Kunstgeschichte*. Heft 220.) Strassburg: Heitz.

Neumann, G. 1965 *Gesten und Gebärolen in der griechischen Kunst*. (Art. bibl.) Berlin: de Gruyter.

Ohm, T. 1948 *Die Gebetsgebärden der Völker und das Christentum*. Leiden: Brill. (Anthrop. bibl.)

Ollendorf, O. 1912 *Andacht in der Malerei*. Leipzig: Zeitler.

Paradisi, B. 1962 Rito e Retorica in un Gesto della Mano. *Studi in onore di A. C. Jemolo*. Milano: Giuffre. (Origins of 'speaking gesture'.)

Portig, G. 1885 *Die Darstellung des Schmerzes in der Plastik*. Heidelberg: Winter.

Reinach, S. 1924 L'Histoire des Gestes. *Rev. Archéol.* (5) **20**, 64–79.

Riemschneider-Hoerner, M. 1939 *Der Wandel der Gebärde in der Kunst*. Frankfurt a.M.: V. Klostermann.

Saxl, F. 1932 Die Ausdrucksgebärden der bildenden Kunst. *Bericht XII Kongr. deutsch. Gesell. Psych. Hamburg*. Jena: Fischer. (Brief report about Warburg.)

Sittl, C. 1890 *Die Gebärden der Griechen und Römer*. Leipzig: Teubner.

Taylor, A. 1956 *The Shanghai gesture*. Helsinki: Academia Scientiarum Fennica.

Tikkanen, J. J. 1913 *Zwei Gebärden mit dem Zeigefinger*. (*Acta Soc. Sci. Fenn.* **43**). (Pensive and pointing gestures in art.)

Vorwahl, H. 1932 *Die Gebärdensprache im Alten Testament*. Berlin: Ebering.

Warburg, A. 1932 *Gesammelte Schriften*, Leipzig: Teubner.

Wespi, H. U. 1949 *Die Geste als Ausdrucksform und ihre Beziehungen zur Rede;...Beispiele aus der französischen Literatur* 1900–1945 (*Romanica Helvetica* **33**). Bern: Francke.

Wittkower, R. 1957 El Greco's language of gestures. *Art News*, March. New York.

Wolff, C. 1945 *A psychology of gesture*. London: Methuen and Co. (Bibl.)

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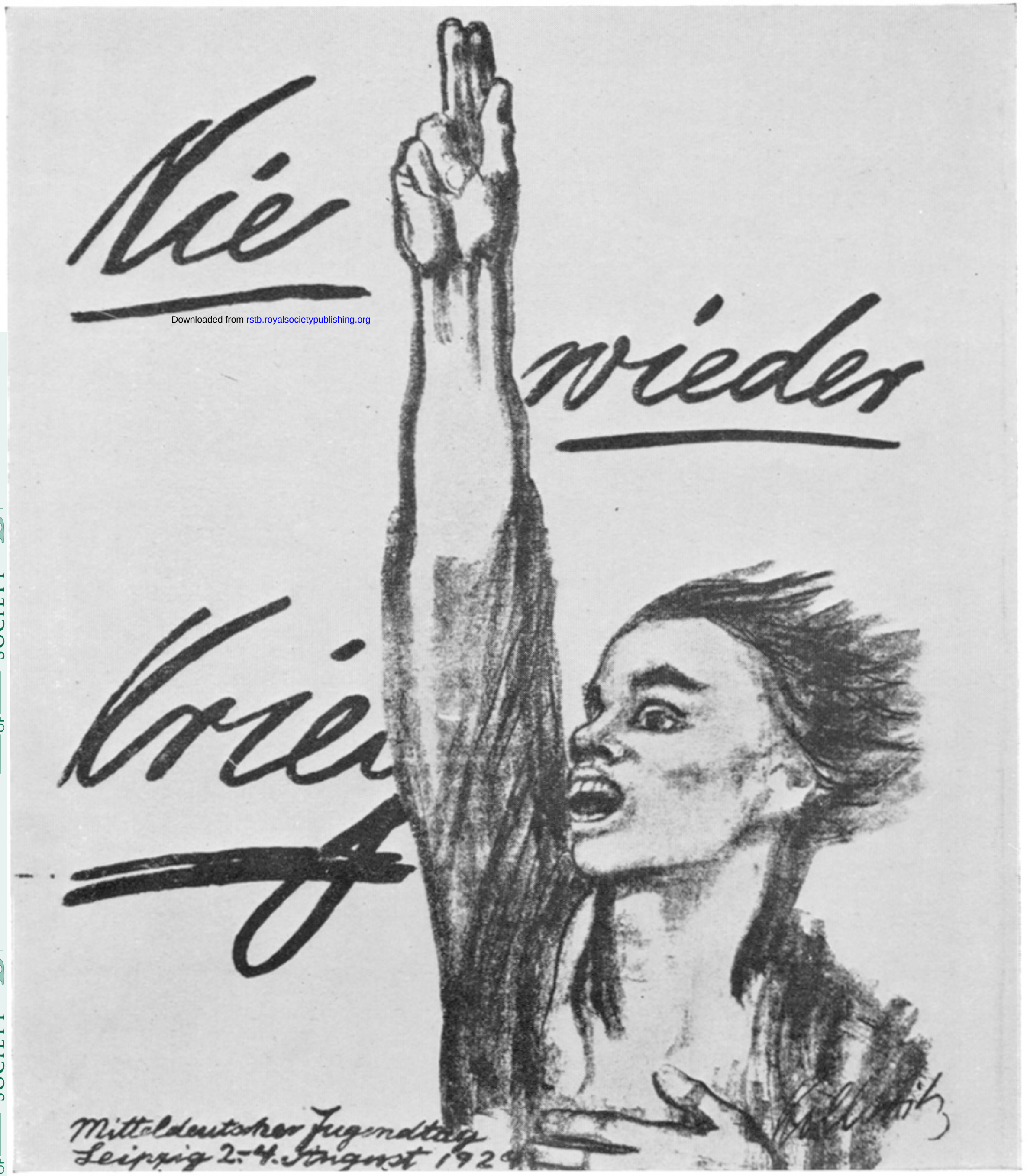
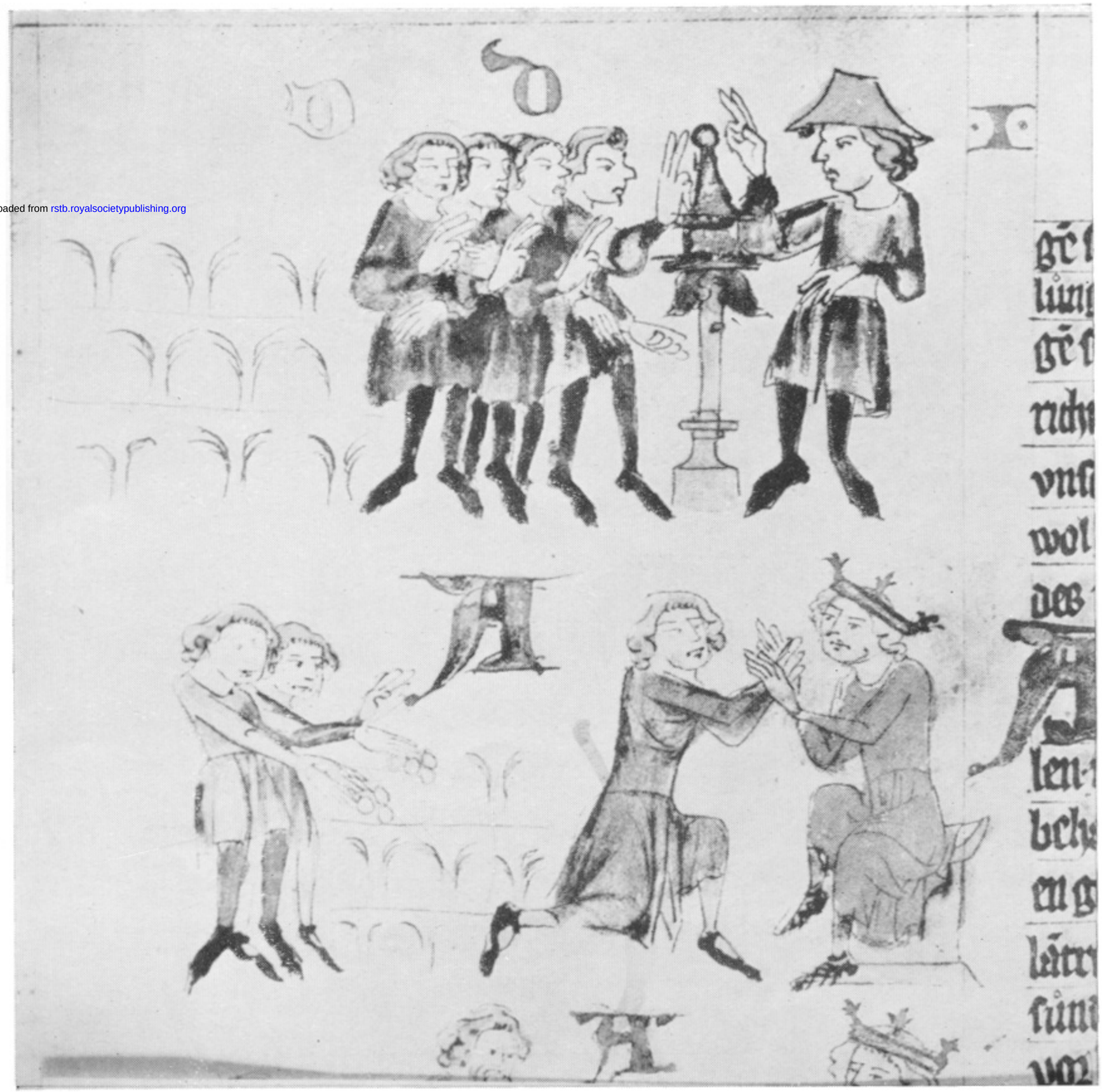


FIGURE 1. Kaethe Kollwitz, anti-war poster, 1924.



IGURE 2. Swearing on the relic, and oath of allegiance, from the manuscript of the *Sachsenspiegel*, fourteenth century, Dresden (after Amira, *Der Dresdener Sachsenspiegel*, 1902, pl. 15).

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FIGURE 3. God the Father, from the Ghent altarpiece by the brothers van Eyck, early fifteenth century. (Copyright A.C.L. Brussels.)

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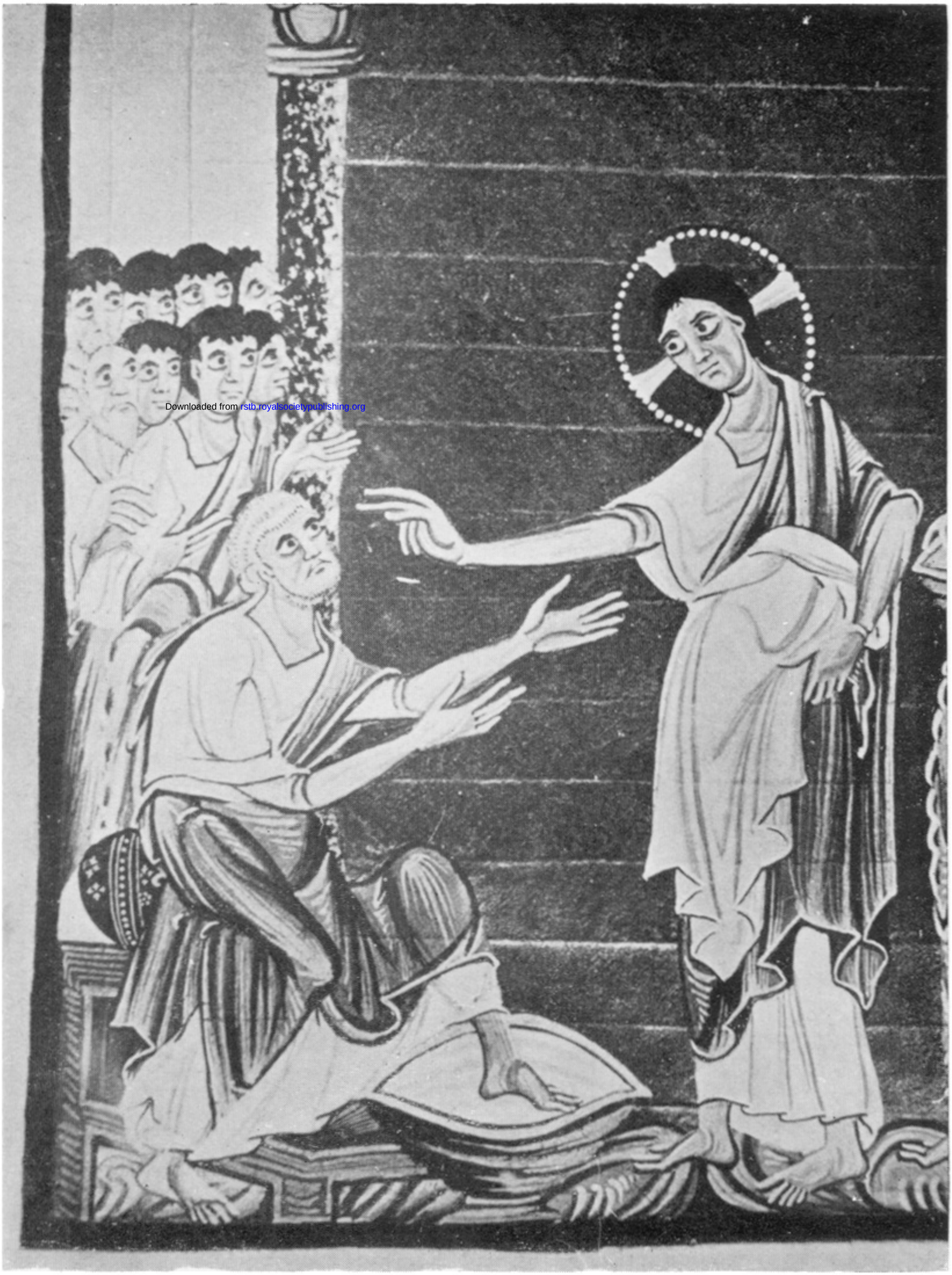

FIGURE 4. The washing of the feet, from a Gospel Book of Otto III, German, *ca.* 1000, Munich, Staatsbibliothek.

FIGURE 5. St John the Baptist, from the Isenheim altar by Mathias Gruenwald, *ca.* 1515, Colmar. (Photo Marburg.)

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FIGURE 6. Lenin, anonymous Russian poster, *ca.* 1920. (After Polanski, *The Revolutionary Poster.*)

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FIGURE 7

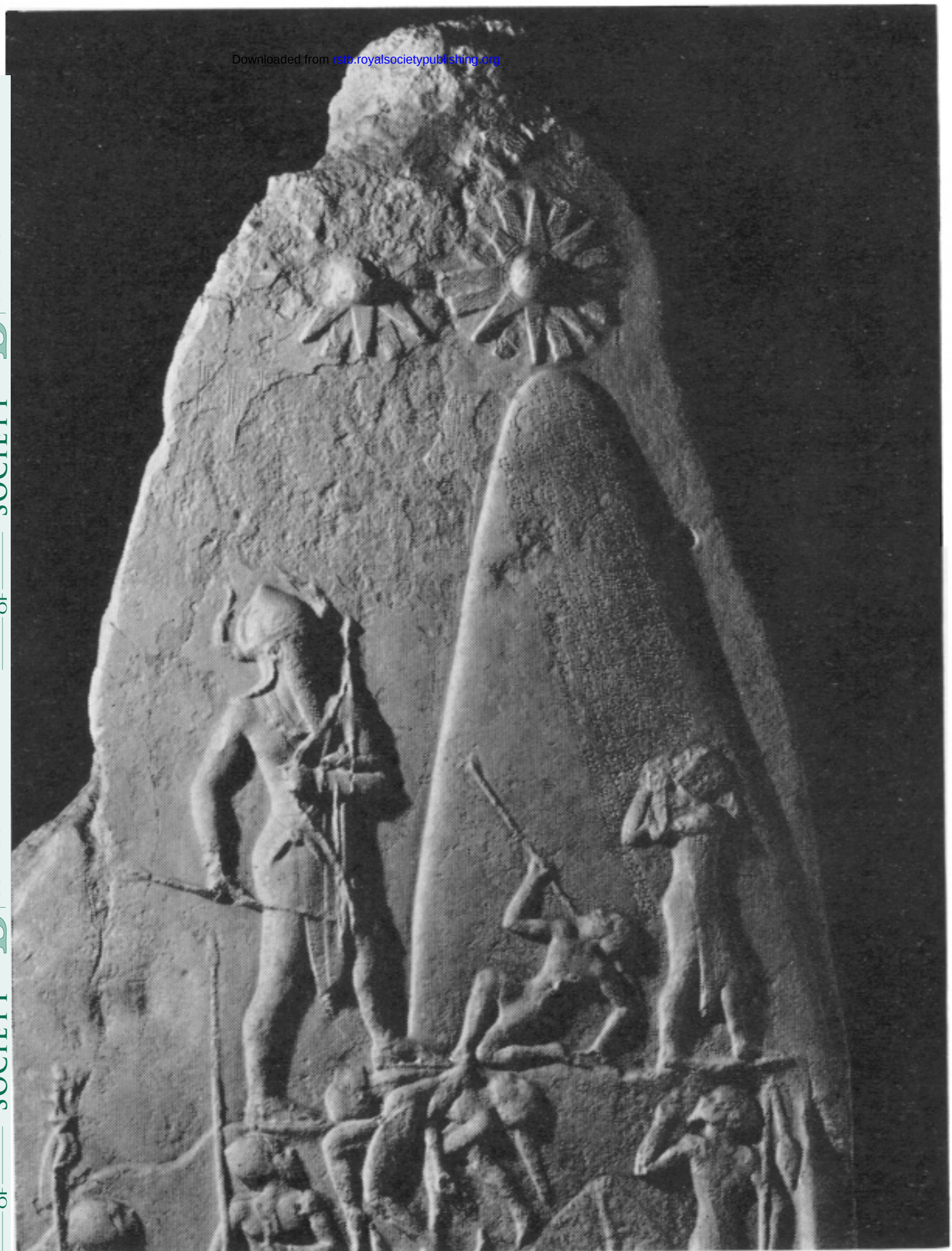

FIGURE 8

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FIGURE 9

FIGURE 10

FIGURE 11

FIGURE 12. Statuette of a barbarian, Roman, early Imperial, Paris, Bibliothèque Nationale.

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IGURE 13. Tomb of Sir Henry Norris, detail, by an anonymous sculptor, 1603, Westminster Abbey, London.

FIGURE 14. The Virgin as a child, by Zurbaran, *ca.* 1630, New York, Metropolitan Museum.

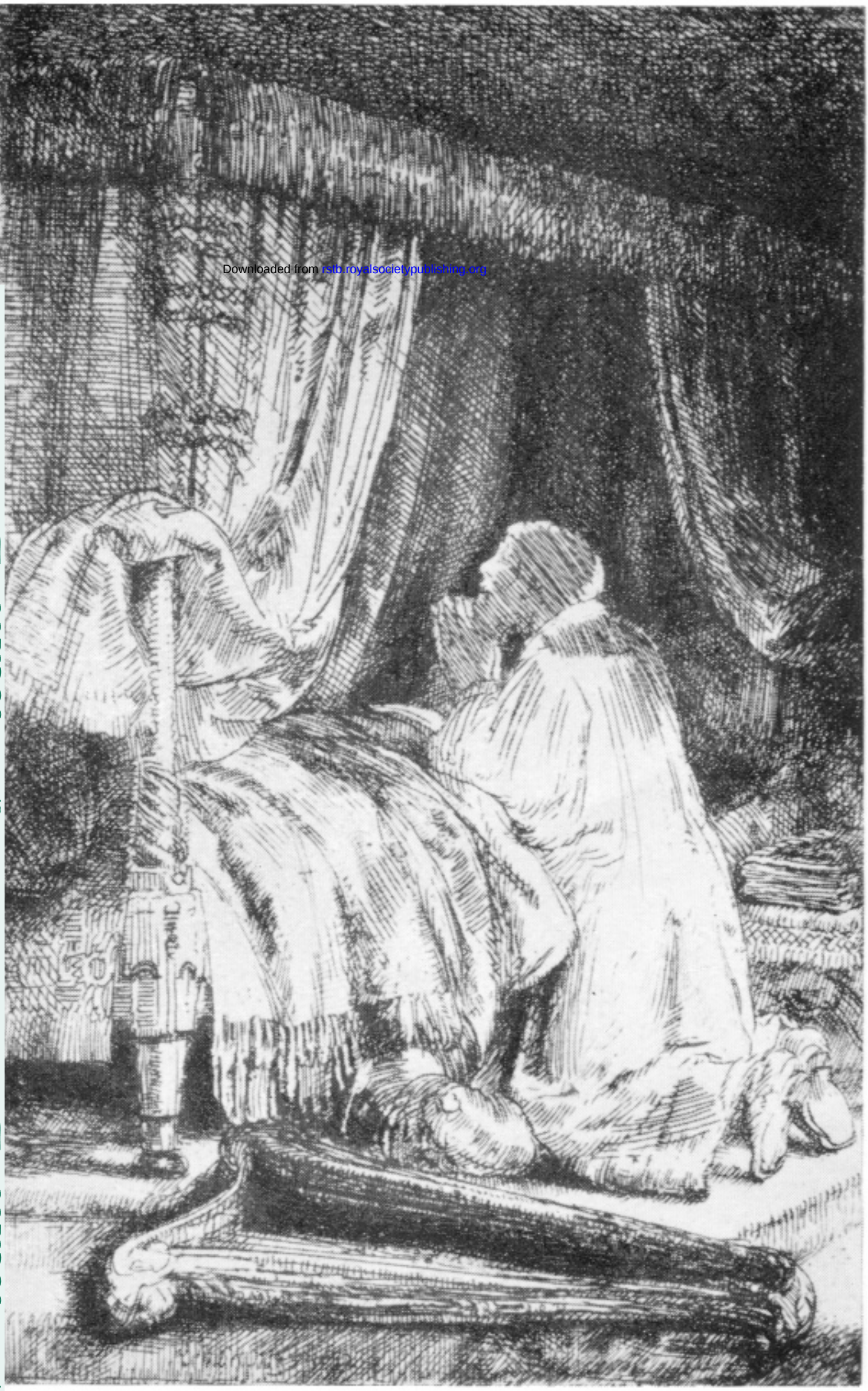

FIGURE 15. David in prayer, etching by Rembrandt, 1652, British Museum.

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FIGURE 16

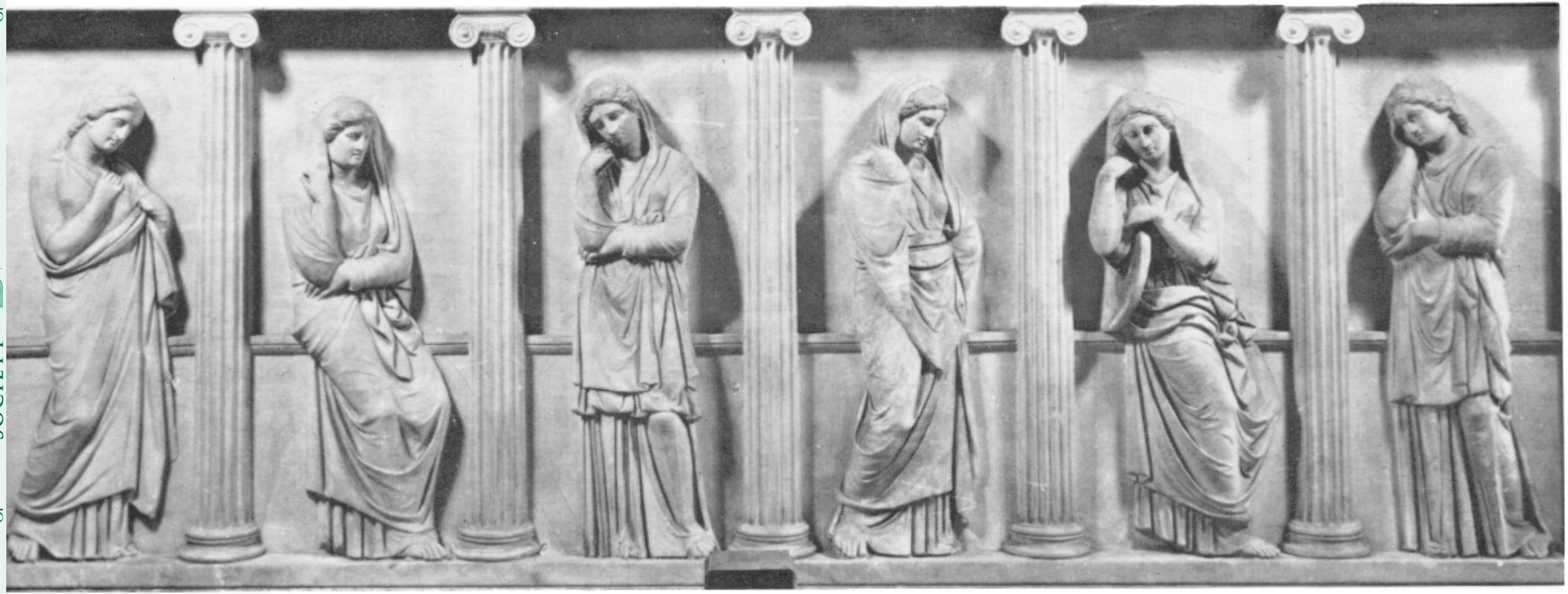

FIGURE 17

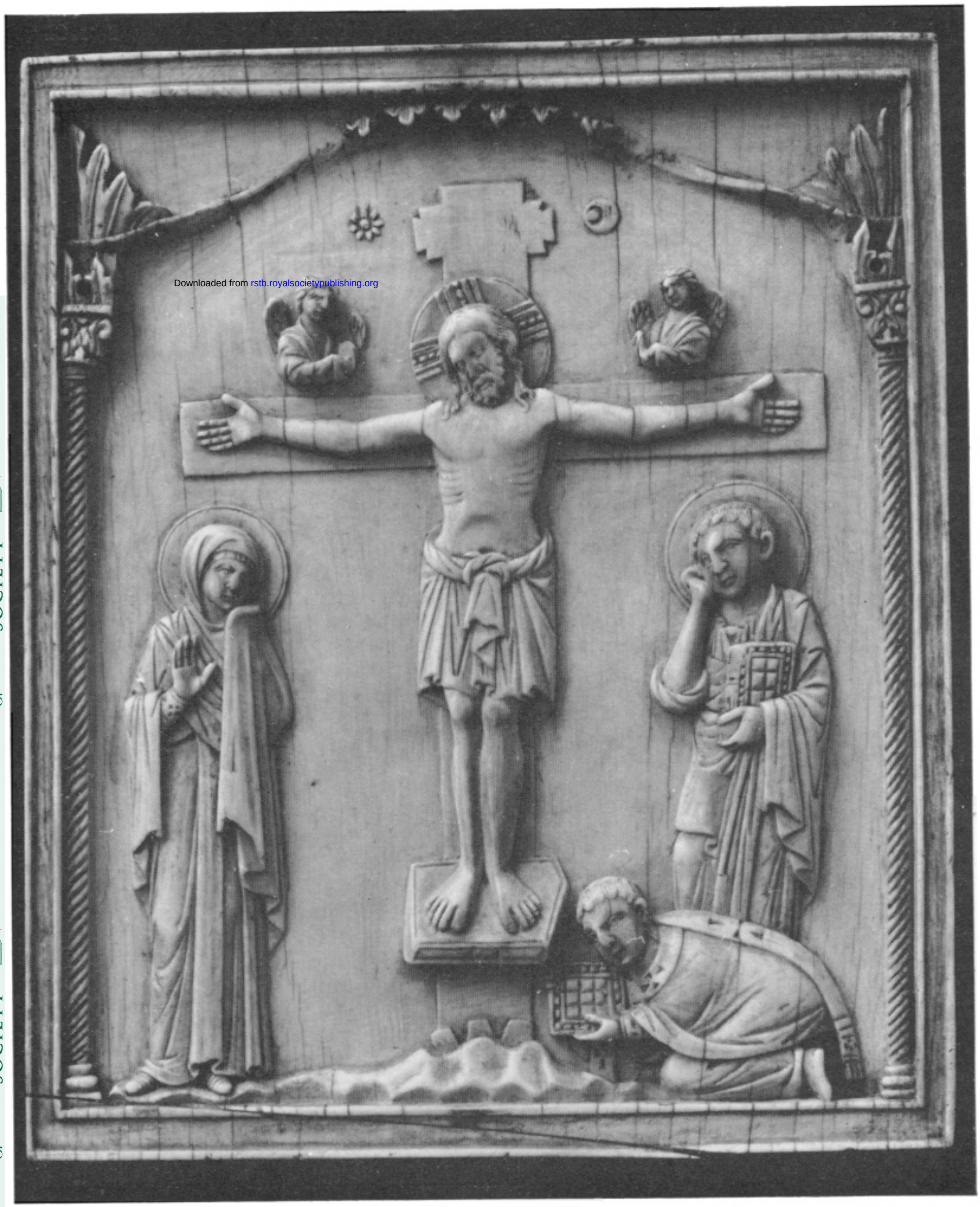

FIGURE 18

FIGURE 19. A mourning woman under the Cross, from the pulpit relief by Donatello, *ca.* 1460–70, S. Lorenzo, Florence. (Photo Alinari.)

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FIGURE 20. Dionysiac revels, Roman Imperial relief, Vatican Museum. (Photo Anderson.)

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