

Contrived reality: Weather and Geology in Jacob van Ruisdael's painting "View of Ootmarsum"

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17th century Dutch landscape painting occupies an exceptional position in the history of art thanks to its near-natural representative mode. Nevertheless, this genre is generally not preoccupied with the rendition of a faithful reproduction of the landscape, instead concerning itself with compositional images amalgamated from replicated components which are close to nature. The work of art itself is thus always more than the mere summary fusion of these individual components (Neumann/Ossing 1997).

Discussions on assertions made concerning nature's reproduction in 17th century paintings by Dutch masters have persisted for over a century now, these sparked as a result of this detailed, and, in the above sense, realistic representation. Freedberg/de Vries (1991) summarise the progress made by these discussions up to the end of the 1980s.

Attempts were made early on to acquire information about the climate called the "Little Ice Age", a period of cooling which lasted from the 16th to the 19th centuries, as related to the paintings from this epoch. However, it must be admitted that, today, the level of insight gained in terms of analytical climatic research is rather low, while, on the other hand, discussion regarding the contextual realism within Dutch landscape painting is becoming increasingly reliant upon scientific argumentation.

In point of fact, the recognition that the Dutch masters created paintings in which a close scrutiny of nature was routine is not synonymous with a decline in the realism of visual representation. The paintings transcend the replicated natural elements in the form of a compositional ideal image of their world. We are thus dealing with a so-called contrived reality.

Jacob van Ruisdael (1628/29 - 1682) was, indisputably, one of the leading Dutch masters in the 17th century. His representation of the sky over Holland and his painstaking replication of the landscape are characterised by unsurpassable precision, simultaneously rendering the mood of the said landscape in its manifold diversity.

The following text contains an analysis of his painting "View of Ootmarsum" (dated at approximately 1670/75), whose aim is to reveal the rich detail and the precise reproduction of the meteorological and geological conditions of this swathe of land.

The [small town of Ootmarsum \(Overijssel\)](#) lies near to the Dutch-German border, approximately parallel to Nordhorn. The town of Bentheim, which Ruisdael visited in the 1650s, is located around 20 km to the south-east of Ootmarsum. One can assume that Ruisdael during his trip to Bentheim passed through Ootmarsum, where he completed sketches from which the painting subsequently originated, i.e. between 1670 and 1675 (Slive, 2001, p.105).

The painting

The painting's location can be determined very precisely, even today: to the west of the town stands a hill called [Kuiperberg](#), some 71 m in height; from this, the view stretches out to the east over the town, reaching as far as the North Westphalian lowlands. Ootmarsum's church steeple dominates the centre of the painting, protruding conspicuously over the painting's skyline (fig. 1). The church is surrounded by the red tiled roofs of the bourgeois dwellings, burnished by the sunlight. The canvas-covered vanes of the Bökkers windmill glisten whitely on the painting's left-hand side, while the little spire of Ootmarsum's commander's office, the "Huis Ootmarsum", cranes upwards, just grazing the skyline. Another bleached, sunlit hayfield, covered with drying linen, can be seen in the centre foreground, in front of the town. Other foreground details include a herd of sheep on the right-hand side, grazing in a field, while three well-dressed gentlemen converse in the centre, accompanied by their dogs. To the right, on the skyline, Bentheim castle is visible in the distance, inserted into the painting in miniature.

The clouds in the sky emphasise the fine weather, while a couple of crows take advantage of the fine summer wind, flying around to the left of the church steeple.



Fig. 1: Jacob van Ruisdael, "View of Ootmarsum", approx. 1670/75, canvas, 59.1 x 73.2 cm, [Alte Pinakothek, Munich](#), (Inv. No. 10818)

If one compares the painting's scenery with the present-day reality, it becomes immediately apparent that Ruisdael took a number of artistic liberties (fig. 2).



Fig. 2: Present-day view of Ootmarsum from the Kuiperberg (March 2006, photographs: H.-U. Hillebrand, Gescher). The old church steeple was demolished in 1839 and replaced by the current one, which can be seen in the centre of the picture. ([click to enlarge](#))

The church steeple as depicted by Ruisdael no longer exists, as it was demolished in 1839 as a result of dilapidation (Kolks, 1978). Nevertheless, it is immediately obvious that Ruisdael inflated both the church and its steeple considerably in order to allow the building to penetrate the painting's skyline: both the present-day view (fig. 2) and the historic sketch by A. de Haen (fig. 3a) clearly demonstrate this.

In Ruisdael's painting, the altar chapel's pseudo double transept on the south side is furnished with a small projection which does not exist in reality (Kolks 1978, p. 90).



Fig. 3: *The church in Ootmarsum. Left: the church around 1733 (a sketch attributed to Abraham de Haen); right: the church in March 2006 (Photograph: H.-U. Hillebrand, Gescher, click to enlarge).*

Bentheim's castle lies approximately 22 km from Ootmarsum in an east-south-easterly direction (around 125°) (*). This means that it cannot lie at the angle it does in the painting; Ruisdael simply moved it further to the north-east so that, in the painting, its sunlit countenance can appear to the left of the little spire of the *Huis Ootmarsum*, belonging to the then commander, on the skyline, allowing it to become a defining element on the horizon.

This emphasises the fact that Jacob van Ruisdael does not present us with a topographical reproduction of the landscape, but fuses it harmoniously with the aim of producing an ideal compositional image, thus creating it anew. While the reality is not adulterated, it is reinterpreted to form an image statement without being transformed into an illusory topography.

If we now direct our attention to meteorology and the geological conditions within the section of Europe represented here, we are able to examine how nature is correctly reproduced, and used to form a compositional image.

The weather in the painting

A close look at the painting reveals that the season is early late summer, for, on the one hand, shocks of corn stacked up on the left-hand edge of the painting can be seen, probably oats, which is harvested earlier than the other corn types; the sheep to the right of the painting are also grazing on an already harvested field. On the other hand, there is a great deal of uncut grain in the fields in front of the windmill.

The approximate time can be ascertained from the way the shadows fall and the church is lit, and from the sun's position in the sky: it is thus late morning.

The meteorological conditions are commensurate with the season and the time of day. As the view within the painting is directed quite precisely to the east, the wind is probably blowing from the south-west, because the vanes of the Bökkers windmill are pointing in this direction.

This assumption is supported by an analysis of the clouds. The clouds represented in the painting are moderately to strongly developed heap clouds (*Cumulus mediocris* and *Cumulus congestus*), topped by higher fleecy clouds (*Cirrus* or *Cirrostratus*), denoted by the sky's subtle white colouring. At the upper end of the *Cumulus* above the church, and in the case of the heap clouds on the right-hand edge of the painting, corollary clouds of medium height can be discerned.

It is usual for such clouds to develop on a summery morning provided that the atmospheric layers are sufficiently unstable. Warm air rises when the ground has reached an adequate temperature, cooling off as it ascends, and thus forming cumulus clouds.

It strikes the observer that the heap clouds are ranged in long cloud streets from what is approximately a west-south-westerly direction (around 240°) towards the east-north-east, a further evidence of the wind direction. The angle between the surface wind and the direction of the cloud streets is indicative of the

wind's clockwise rotation at a height of around 30°, a typical effect of the advection of cold air within our latitudes. This explains the marked upward sweep ("thermal lift") during irradiation in the mornings during the summer months. Gliders prize meteorological conditions like these highly, for cumulus cloud streets, with their upward movement, facilitate prolonged gliding times. The crows to the left of the church steeple are making use of this thermal lift as well. A closer look at the cumulus clouds demonstrates that they incline subtly to the north-east in terms of height - a result of the increase in wind speed with height. This so-called wind shear also indicates the wind direction thanks to its south-westerly, north-easterly slant.

Wind direction, location and clouds point to a ridge of high pressure over Holland/West Germany. Although a trough of low pressure may have covered the region the previous day, moderate high pressure is now building up, which could, however, be swiftly followed by another drop in pressure, marking the advent of the next low pressure area. These are common weather conditions considering the season, and promise a pleasant summer's day (fig. 4).



Fig. 4: Moderate Cumulus clouds (*Cumulus mediocris*) and thinner Cirrus clouds, 4th August 2002, morning, view to the SW, near Coesfeld, Westphalia, Germany. This view of the sky corresponds to the one in Ruisdael's painting. (photo: F. Ossing, GFZ)

The geological conditions near Ootmarsum

As another study has already demonstrated, the Dutch masters reproduced the "Gouden Eeuw", or the geological conditions of their homeland, extremely precisely in their paintings ([Ossing/Negendank/Emmermann 2001](#)). This applies particularly to Jacob van Ruisdael's works. The "View of Ootmarsum" is a case in point, the geological reality composed perfectly in this painting.

The geological presence of this part of Holland began with the extended glacial thrusts from Scandinavia during the last glacial period but one, the Saale Ice Age. A massive thrust of ice at the beginning of this ice age, approximately 250,000 years ago, created a mountain ridge up to 150 m in height with the force of a bulldozer. Parts of this garland-shaped ultimate moraine wall, which stretches through Holland from west to east, additionally extending through all of northern Germany, include, among other landmarks, the Dammer hill range between Osnabrück and Bremen and the Kuiperberg, where Ruisdael chose to locate his painting. Today, the Kuiperberg is still 71 m high, but has lost around half of its original height thanks to continual erosion during alternating ice ages and warm periods (van den Berg and Beets,

1987). It consists of pre-ice age deposits, pushed together by the ice, into which erratic blocks from central and southern Sweden were pressed. During the great ice thrust, massive glacial tongues formed at the ice's edge, which developed into garland-shaped formations (lobes) on the ultimate moraine wall. The Kuiperberg is part of one of these horseshoe-shaped lobes, spanning as it does around 30 km. The steep flanks of the predominantly asymmetrical ultimate moraines are indicative of the glacier's effect. In the case of the Kuiperberg, this is the easterly slope in the painting's line of vision, where the town of Ootmarsum is located. Ruisdael placed great emphasis on the steep nature of this slope.

After the glacial melt, a large tongue-shaped basin lake formed where the glacial tongue once was, whose bed lay around 60 m below the landscape's present surface level. At the end of the Saale Ice Age, this lake filled with sediment and silted up. The little river of Vechte subsequently intersected with the resultant flat silted surface, and flows around 20 km away in terms of the painting's line of vision. In the current warm period which has prevailed for the past 11,000 years, the flat, fertile floodplain landscape formed in the Vechte and the more easterly Ems valleys, whose rich vegetation and breadth is documented so impressively in Ruisdael's painting.

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Source: <http://www.bib.gfz-potsdam.de/pub/wegezurkunst/>

Information on the church in Ootmarsum on the internet:

<http://www.atlas1868.nl/>

<http://members.home.nl/m.tettero/Watergeuzen/Ootmarsum.htm>

(*) The direction of the cardinal points will be stated here in accordance with convention, e.g. 360° / 0° equals north, 90° equals east, 180° equals south etc.