Continent

The word continent is derived from the Latin terra continens – a continuous tract of land. The word has thus come to refer to a vast continuous surface area of the globe surrounded by oceanic masses. In a second approach, the word continent is used, in particular among island communities, to refer to what is more generally known as the mainland. In this case there is a Â«discontinuityÂ» between islands and archipelagos some distance from the continental mass and the mainland, reversing the land-sea relationship. A number of uncertainties arise from this dual acceptation as to the way in which the Â«EarthÂ» is divided up into several continents, and there is a discrepancy between the geographical approach and the geological foundations of the notion.

In the allocation of Â«territoriesÂ» to the different continents, islands are generally considered to belong to the continent to which they are the closest. Thus the Canary Islands, although Spanish territory, are geographically attached to Africa. The insular British view themselves as not belonging to "the Continent", while in geological terms the British Isles are clearly a part of Eurasia.

The number of continents and their boundaries have varied and been the subject of much debate, depending on the protagonists involved and the context. Geographical teaching subdivides the Earth into five continents (Africa, America, Asia, Europe and Oceania. However this division forgets the Antarctic continent, despite the fact that it extends over 12 million square kilometres, while at the same time exaggerating the place of Oceania with its tens of thousands of islands (but only 9 million square kilometres), and Europe which could be considered as a Â«peninsulaÂ» belonging to the vast Eurasian continent. In this subdivision, the notion of continent is restricted to inhabited areas, and this assimilation of the continent to the Ecumene is perpetuated for instance in the five circles of the Olympic flag. There is a tendency to replace the notion of continent by that of a "part of the world". Because of its evocative force, the word continent has also been used in geographical vocabulary to create quasi- or sub-continents (India) or, by analogy, continent-States (China, Brazil, Russia, the United States).

Knowledge concerning the formation and the tectonic mechanisms of the continental and oceanic masses progressed considerably at the start of the 20th century with A. Wegener's "continental drift" theory. This hypothesis on the movements of continents, elaborated from an intuition concerning the way in which the contours of the continental masses fitted one into the other, alongside the observation of geological and paleontological similarities between the South America, Africa, the Middle East, India and Australia, took the place of the earlier fixed view of the origin of continents. Basing his reflection on the geophysical discoveries of his time, Wegener envisaged the continents as large masses of light, acidic material, in which silica and aluminium dominated (the sial), floating on a more basic, denser layer, mainly composed of silica and magnesium (the sima). His hypothesis has been replaced since the 1970s by a complete theory of the functioning of the Earth's crust, known as plate tectonics. According to this notion, the continents are only a part of large plates that are both oceanic and continental, the material of which reforms at the bottom of wide trenches on the plate boundaries in the middle of the oceans. These gradually move apart, the material is compressed and subducted beneath large mountain ranges. The geographical boundary between continents and oceans is the separation between two types of crust making up the lithosphere plates - the thick continental crust (20 km) which is not very dense and made up of acidic metamorphic and crystalline rocks and sediments, and the oceanic crust, which is not very thick (7 km), denser, and made up of basic and ultrabasic rocks. The topographical boundary between continents and oceans for its part is further inland from the geological boundary, because marine erosion and variations in sea level have led to an advance of the oceans onto the continental borders, and the formation of a continental slope under the sea from the coastline to a depth of about 180m, known as the continental shelf, a zone often covered by recent sediments.

The interferences between geological definitions and representations arise again when the question of the maritime boundaries of continents is at issue. In terms of common sense, the continent stops at the coast, and beyond is what is known as the "open sea" or according to Alain Corbin the "territoire du vide" (territory of emptiness), while from a geological point of view the abysses are further out to sea beyond the edge of the continental shelf. The use of the adjective "continental" for this zone is inappropriate because it is under the sea and forms a gradual slope (less than 1%). It can extend as far as 500 km (Argentina) or be completely absent (Chile). The relatively shallow depth gives it strategic and economic interest, since it is there that most fishing Â«resourcesÂ» are to be found on the planet. The apparent boundary formed by the coastline also exhibits considerable variations over geological time. Half a dozen eustatic variations have indeed occurred since the Cretaceous, and the present-day aspect of our coastlines and the immediate inland areas have been profoundly affected by the changes in sea level linked to the most recent Dunkirk (marine) transgression.

Bibliographie