

TECHNOLOGY: ANGEL OR DEMON?

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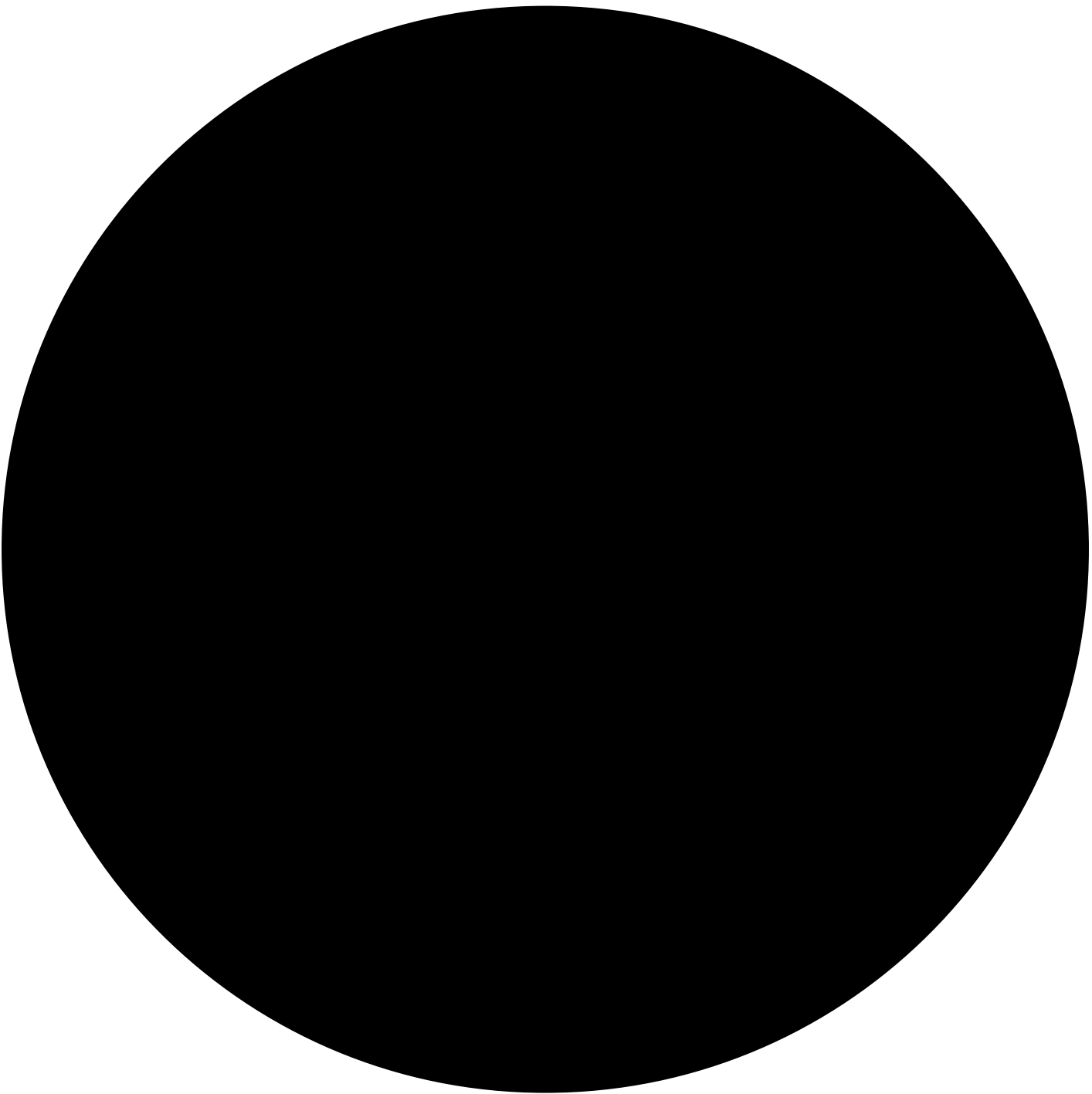


TECNOLOGÍA: ¿ÁNGEL O DEMONIO?

El Principio de Precaución aplicado a la tecnología como herramienta para un desarrollo mas sostenible

naider

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Technology, as a socio-economic concept and instrument, can be **both positive and negative for the environment**. For example, technological progress allows us to access renewable energy sources and create more efficient and respectful with nature. However, technology also increases the rates of extraction (and use) of natural resources above the natural renewal rates themselves, which contributes to the depletion of these resources, as is happening with fresh water or tropical forests.

The technology itself is not what determines its environmental impact, but **the speed and pace at which it develops**. Too fast a technological advance can not only cause the extraction and use of natural resources to be faster than the natural rate of renewal (growth) of the resource, but also that governments do not have enough time to implement environmental policies. In general terms, **politics moves at a slower speed than technological development**. For this reason, environmental protection – so dependent on public funds and policies – often lags behind the technological development of the private sector.

Technology is an essential element to preserve the environment and move towards sustainable development. But it must be carefully financed, developed and implemented. How can this balance be achieved? This is where the so-called **Precautionary Principle** enters the scene, a strategy that operates between science and political decision-making. Given the lack of knowledge and scientific certainty about the danger that technological advances can cause

in the environment, the objective of this principle is to determine how safe is *safe enough* when we talk about technological development. In other words, when in doubt, this principle establishes that **actions that may be harmful to the environment must be avoided**.

The problem with this principle is that it has always been considered as too diffuse and general a concept. However, there are more and more cases in which the Precautionary Principle **is applied for the good of the environment in a way practice**. A clear example occurred when the Court of Justice of the European Union (CJEU) ruled against the Government of Spain in the case of the Santoña, Victoria and Joyel Marshes Natural Park (Cantabria). This sentence, of August 3, 1993, dictated the breach by the Government of Spain of the [Directive 79/409/EEC](#) of the Council, relative to the conservation of wild birds and their habitats. After the Spanish authorities justified the destruction of a high-value bird site on the grounds that this would not reduce the number of protected birds, the CJEU applied the **Precautionary Principle** to avoid said action and denounce the Government of Spain. The CJEU argued that the destruction of a natural habitat does not necessarily translate into an *immediate reduction* of the fauna population, but that this process may take time to be observable and quantified since the habitat has been disturbed by humans – this concept is called [extinction debt](#). In summary, the CJEU used the **Precautionary Principle** based on the damage that anthropic activities *could be causing* to the environment – although said impact was not were actually observable.

This case shows us the importance of applying this principle in view of the acceleration of technological development in our society. **Technology is essential for human well-being and economic development, yes; but not at any price**. Relying and relying solely on technology to sustain current economic growth should not be the only path to sustainable development, due to its unpredictable nature. In addition, the so-called [Jevons paradox](#) (or rebound effect) states that as technological advance increases the efficiency with which a resource is used, the consumption of that resource will most likely increase – rather than decrease – thus canceling out the positive environmental effects of technological efficiency.

In conclusion, despite the difficulty involved, we need to encourage **a somewhat slower, though constant, technological development that takes into account the Precautionary Principle**. In this way, we will be continuing with the technological development necessary to create a modern and advanced society, at the same time that we protect our life support: the environment.

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