

*Linguistics*. Chomsky showed how the behaviorist theory did not address the notion of creativity in language — it did not explain how a child could understand and make up sentences that he or she had never heard before. There were many works in knowledge representation - it's the study of how to put knowledge into a form that a computer can reason with.

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### **THE HISTORY OF PHOTOGRAPHY**

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"Photography" is derived from the Greek words *photos* ("light") and *graphein* ("to draw"). The word was first used by the scientist Sir John F.W. Herschel in 1839. It is a method of recording images by the action of light, or related radiation, on a sensitive material. Alhazen (Ibn Al-Haytham), who lived around 1000AD, invented the first pinhole camera (also called the *Camera Obscura*) and was able to explain why the images were upside down.

The first photographic image was made with a camera obscura by Joseph Nicéphore Niépce in 1827. Niépce's photograph required eight hours of light exposure to create and after appearing would soon fade away.

Louis Daguerre was the inventor of the first practical process of photography. In 1839 after several years of experimentation and Niépce's death, Daguerre developed a more convenient and effective method of photography. Daguerre's process 'fixed' the images onto a sheet of silver-plated copper. He polished the silver and coated it in iodine, creating a surface that was sensitive to light. Then he put the plate in a camera and exposed it for a few minutes. After the image was painted by light, Daguerre bathed the plate in a solution of silver chloride. This process created a lasting image, one that would not change if exposed to light.

The use of photographic film was pioneered by George Eastman who started manufacturing paper film in 1885 before switching to celluloid in 1889. His first camera, which he called the "Kodak," was first offered for sale in 1888.

While conventional cameras were becoming more refined and sophisticated, an entirely new type of camera appeared on the market in 1948. This was the Polaroid Model 95, the world's first viable instant-picture camera. Known as a Land Camera after its inventor, Edwin Land, the Model 95 used a patented chemical process to produce finished positive prints from the exposed negatives in under a minute.

The concept of digitizing images on scanners and the concept of digitizing video signals predate the concept of making still pictures by digitizing signals from an array of discrete sensor elements. At Philips Labs. in New York, Edward Stupp, Pieter Cath and Zsolt Szilagyí filed for a patent on "All Solid State Radiation Imagers" on 6 September 1968 and constructed a flat-screen target for receiving and storing an optical image on a matrix composed of an array of photodiodes connected to a capacitor to form an array of two terminal devices connected in rows and columns. The Fuji DS-1P of 1988 was the first true digital camera that recorded images as a computerized file.

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### **PROMISING ALTERNATIVES: PELLETS**

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Wood pellets is the normalized cylindrical pressed product of the residual dried wood, such as: flour from of woodworking machines, chips and remnants of forest timber. Wood pellets are produced without chemical fixative at high pressure. Wood pellets are a source of a renewable energy produced from a variety of wood waste products. This fuel is manufactured in an established production process. The majority of this fuel is consumed in household heating stoves but there is a growing world market for other uses such as large scale electricity generation in Sweden.

The pellets themselves have a cylindrical form from 6mm to 8mm diameter and must not be longer than 38 mm (1.5 inches). Thus formed, they are an easily managed, free flowing, virtually dust free fuel.

Wood pelleting today is a niche market with the resultant advantages:

1. there will always exist favorable financial factors in the given marketplace;