

Psychological Examination of

Rudolf Diesel

Father of Modern Combustion Engines

with Robert Nitske's book

Rudolf Diesel: Pioneer of the Age of Power

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Context

Rudolf Diesel lived as an ingenious thermal engineer in the late 1800's and early 1900's. He invented the compression ignition engine that bears his name, the diesel engine. Diesel was a natural intellectual, pacifist and hard worker, yet along his life he suffered from mental illnesses and viewpoints that finally led to his bankruptcy and suicide.

Rudolf Diesel was born in 1857 in Paris of Bavarian parents. His family was poor with his father working as a leather worker. When Diesel was twelve, Diesel's family moved to London but Rudolf eventually moved to Augsburg in Bavaria to attend a technical school. At the school, Rudolf Diesel decided to become a mechanical engineer or more specifically in his words a "thermal engineer". He did excellent and earned the best grades ever made in the engineering school's history. A director of the engineering school at Munich was so impressed that Diesel was given an all expenses paid scholarship. On the final exit examinations of the Munich School, Diesel once again made the highest known grade and was subsequently offered a job by a French ice and refrigeration company.

With working on ice machines, Diesel had developed ideas of how to create an internal combustion engine fired by the compression of air. After several attempts and many months of work, Diesel's engine finally powered its self in February of 1894. Contracts to produce the engine in Europe, America and Asia yielded several million marks; however, Diesel did a poor job of managing his money. Many of his investments throughout his life were scams or hopeless for even returning his investments. He also spent tremendous sums of money for building a large house that he hated. Now heavily into debt and suffering massive headaches, Diesel committed suicide by jumping from a ship. He took with him a

medicine container, a money bag and his glasses. His body was found and returned to the North Sea with his carried items removed for later identification.

Personality

Trait Perspective

Diesel's personality shows clearly when viewed by the trait perspective. Throughout his life, his traits of conscientiousness, practicality and emotions are consistent.

Diesel's German heritage shows in his organization and ability to discipline himself to complete and manage projects. When Diesel left his family to study in Germany, he organized his education to avoid being a failure and poor as his father. As Diesel created his development engines, he kept meticulous and difficult to create notes that he knew would later help design new and better engines. During his job at the ice machine company, Diesel wrote "I will work.. but I tell you I will be successful." Diesel's trait of organization and discipline are to counter any possibility of failure such as his poor father.

Independence and practicality were major traits of Diesel. His ideas of methods to improve the efficiency of power-plants combined the theoretical views of his engineering education with an understanding of the practical limits of materials and people. During the development of his engines, Diesel tried to make his engines independent of fuel type to prevent a reliance of special fuels other engines required, which were often highly tariffed and distributed by a few corporations. Diesel's decision must have been influenced by his wish to test the limits of his imagination while also ensuring his creation didn't become controlled by the large oil corporations at the time. The trait of independence, given by the inventors similar trait, has become most associated with the diesel engine and even

today these engines are known to run on almost any fuel.

The social and emotional traits are responsible for Diesel's success and eventual downfall. Throughout his adult life, Diesel enjoyed social events such as music and art. In his pursuit of building his engine, he made many good friends and was skilled at impressing people with his work. Diesel's emotions were stable as long as his life was going smoothly. Months before his suicide, he changed from being shy into being sociable and yet reserved and finally being temperamental and fearless just before his death. Diesel vigorously opposed any airship flight as too risky until a few months before his suicide. Before he was forced to sell his car because of debt, he drove it unlike any his normal calm and careful self. Before his death his traits revert to the Rudolf Diesel of his early and mischievous childhood, yet in carrying out his suicide he is careful to fold his clothes on the deck of the ship as in the inventor's manner.

Social Cognitive

Diesel knew that to become successful he would need to control himself. When he chose to attend school in Germany instead of staying with his family in London, he exhibits his control of what type of person he wants to become by ensuring the quality of his education. His persistence at grades in school are his attempts to show himself that he is capable of learning and is not helpless to be a poor tradesman such as his father. Working in the ice machine company allowed Diesel to become familiar with and learn about the mechanisms for heat and power transfer which later were crucial in developing his engine. Also, working with these early machines allowed him to see the massive lack of a good power producing method. In this way, Diesel's behavior shaped his enthusiasm towards thermal machines

while the machines shaped his behavior of wanting to make a good powerplant to drive the machines. Optimism towards making his designs more thermally efficient and easier to use led Diesel to continue his difficult work after making the first compression fired engine. Diesel's loss of control of his invention and loss of his fortune made his environment more hostile making him unable to reconcile both his wish to work and his gloom for the future.

Diesel's behavior was predicable and visibly shaped by his current environment. The clearest of his behavior and response to his environment is his headaches and tenseness which accompanied Diesel throughout his life. These episodes of headaches generally started when he was between projects or when kept waiting for an investment or a contract to finish. Ironically, the doctors recommend that he take a rest break to cure his problems. He does not protest, which suggests he may not have understood the dependence of his illness on stress. Diesel's avoidance of being poor is learned from his poor childhood. So that when he falls into debt, he is reminded of being poor again and again reverts to leaving his family through death as he did when as a child he left his family in London to study in Germany.

Learning and Social Psychology Dual Analysis

Analysis of learning and social psychology explain how Rudolf Diesel was lead to suicide as a highly intelligent and successful man. His development to success depended upon his intelligence and social interactions, both of which he constantly and strictly reviewed. Like many other successful inventors, Diesel striving for successive achievements eventually caused his downfall.

As a child, Diesel was an member of the lower class. Living in Paris, he was sur-

rounded by poverty while also living in a city of the rich and powerful. Diesel's love of art and museums also contributed to knowing and wanting to be in the upper class. He quickly observed how other inventors, engineers and scientist were using their intelligence to become a new social class with no entrance requirements of wealth or family connections. He correctly surmised that being a member of the technology could break him out of his family's poverty.

In school, Diesel did amazingly well. His performance led him to attention from his professors that would not have otherwise happened. When his final tests were interrupted by typhus, his relations with the administration, who knew that he would perform wonderfully on the tests, led his professors to schedule the tests for later in the summer. Diesel must have noticed that his excellence was bringing more favors than would otherwise be expected and would almost certainly lead him to further excellence. From the operant conditioning and social influences standpoint, his actions would be directed by the knowledge that people liked him when he was doing well. Unfortunately, this viewpoint would later turn against him as he developed headaches and major tenseness during the times of his life that he was uncertain of the future.

Diesel's observations and influences by his teachers and friends led him to develop the diesel engine, which was a new idea but based heavily on previous theoretical work by others. His designation of himself as a thermal engineer was based on the influences from the school he attended as well as the people he worked with during his job at the ice machine factory. However, Diesel had to fight to get others to accept his views of the value of his engine. The manufacturers were especially quick to challenge him when an early engine

was unable to be easily manufactured. His engine salesmanship was wonderful regardless of the completeness of his engine and he quickly got sales contracts for production. Because many of the manufacturers' representatives were his friends or acquaintances, his social circle and views of obedience to his engine and future collided. Although he finally got the designs corrected and manufactured, this period taxed his views from schooling and childhood and he began to have more serious headaches and severely interrupted sleep. In a letter to his sister, he writes "I have a headache – to drive me mad, really terrible. I am busy all of the time with my engine and my future; day and night this does not leave me alone." Additionally, his wishes that the manufacturers would help each other with the technical problems encountered were dashed by the natural competitiveness between them. He didn't understand how they could justify not helping each other because he had become successful partially because of others. Nevertheless, he still believes in the eventual payback he will receive. "I believe that such a tremendous amount of work.. eventually has to bring results". Even now his learning from childhood that his work will always bring rewards is still believed. His dedication to his visions of diesel engines even when other inventions would have been easy to develop starts his wife to call the engine the 'black mistress' of Diesel's. For the moment, the engine was bringing in plenty of money and was being developed and refined rapidly. His views of society were opposite that of the majority of the worlds'. He proclaimed, "I am one from everywhere... I like to be a citizen of all the world." While his viewpoint was not socially accepted in the years of the build-up to World War One, Diesel was slowly changing to become more and more opposite from his current society partially because of his travels to other countries. He

appears particularly impressed with the United States. "There are four American virtues which I believe basic. First, I would name the absence of any durable fixed classes. Your poor and rich.. are quite readily interchangeable... My third point is great respect for American inventive talents..." Here he clearly shows his wish for a society ranked only on the inventiveness and intelligence such as he experienced in school.

After the invention and initial production of the diesel engine, Rudolf Diesel began to have problems with maintaining his wealth and sanity. He started a house in southern Germany that cost at least two million marks. Apparently, he associated large houses with successful people. The house did not have the effect of making him a better inventor and more successful. "I can't endure this outrageous mausoleum. It is making me a dismal blue corpse!" The multiple investments he made without professional help started piling up and quickly reached ten million marks. He refused to get help or to bail out of his investments. Diesel's observations of successful people was not applying to himself and even worse, he refused to associate with others especially those who could help him with the financial problems. In his spectacular success with the diesel engine, Rudolf Diesel had learned that his viewpoint must be sound because he had created a better source of power for the world and the world had rewarded him by making him rich and famous. Perhaps to reassure himself, he tries to trick himself into thinking he is superior by joking to friends that others in his life are smarter and "Only I seem to stay stupid." Unfortunately in a growing number of areas, he doesn't apply logic to his problems and not surprisingly the headaches return once again.

As the debt was forcing him to sell his car and mortgage his home, Diesel became

depressed. He started giving clues that he was going to quit. He no longer was reluctant to participate in dangerous behavior such as flying and driving cars fast. His actions were reverting back to his early childhood when he was a solitary and often in trouble. His sister noted, "That wasn't the proud Diesel any more." He was giving up on success because of being unable to cope with everything that life gave to him. Alone with his oldest son, Diesel gave his son the keys to the house's doors and drawers and later burned many of his papers. In contrast to the earlier Diesel who kept every paper and tried to find all of the pertinent information about his projects, he was clearly showing his wish to quit. On a lake with his son, Diesel discussed the easiest way to die at which the son mentioned jumping off a ship. Diesel knew he was going to die and now he had the method. Diesel and a few business partners were scheduled to attend a meeting in London. In contrast to his start in the world by sailing to Germany, the ship they were traveling on was going between the same cities in the opposite order. Somewhere during the night, Diesel jumped. His clothes were meticulously arranged on the deck from which he jumped. He took with him a money bag, a medicine container and his glasses all three of which he associated with his troubles: debt, health and headaches. He had learned to be neat in recording data while working on his engine and now he was recording for others exactly and clearly why he had quit.

Bibliography

Nitske, Robert. (1965) *Rudolf Diesel: Pioneer of the Age of Power*. Norman, Oklahoma:
University of Oklahoma Press.