Motherwell was born in Aberdeen, Washington and studied at Stanford and Harvard with the intention of becoming a philosopher. He was influenced by Alfred North Whitehead, who first challenged him with the notion of abstraction, and when Motherwell moved to New York in 1940 he took that sensibility with him.

Motherwell lived in Greenwich Village where he joined a group of artists—including Jackson Pollock, Willem de Kooning, Mark Rothko and Franz Kline—who set out to change the face of American painting. These artists renounced the prevalent American style, believing its realism depicted only the surface of American life. Influenced by the Surrealists, many of whom had emigrated from Europe to New York, the Abstract Expressionists sought to create essential images that revealed emotional truth and authenticity of feeling.

These early years were an incredibly productive period for Motherwell and he experimented in a range of media, from painting to printmaking to collage. His work often expressed the actions of the artist through dramatic and bright brush strokes. Valued for their energetic imagery, they attempted a pure emotional response made real in paint. Beyond his individual efforts as an artist, Motherwell played a major role in the intellectual and artistic development of the underground New York art world. A serious art historian, Motherwell founded the Documents of Art series.

Reflecting on those early years, he spoke of their belief that "if the abstraction, the violence, the humanity was valid in Abstract Expressionism, then it cut out the ground from every other kind of painting." With the advent of Pop Art and its concentration on popular culture themes, the art public began to long for the idealism of the Abstract Expressionists. In relation to Andy Warhol's soup cans, Motherwell's large abstract paintings began to achieve a grandeur in the public eye. No longer the black sheep of the art world, Motherwell began to enjoy the fruits of years of dedicated work.

He was awarded the National Medal of Arts in 1989, and he died two years later, the last of the great Abstract Expressionists. Motherwell was a Centurion for 24 years, having been proposed by HARVARD ARNASON, author of a classic introduction to art, and seconded by RENE D’HARONCOURT, Director of MOMA.