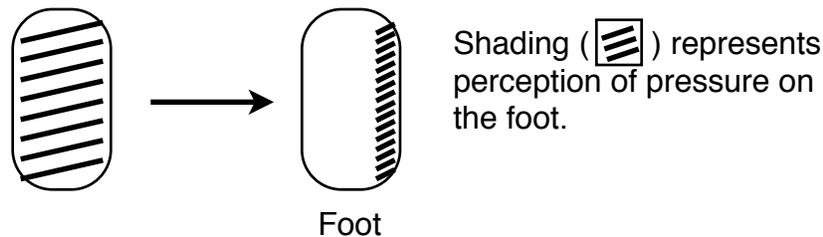


## ABSTRACT

Given our bipedal condition, the skeletal constellation continually degrades leading to painful lower back conditions during the end of life. People naturally learn to walk as children but don't alter the normal gait pattern. If a child learns to walk correctly, the chances of undergoing surgery as a senior will drop.

A simplified representation of an optimized gait



Consider the simplicity of reorganizing the perception of walking. Because we place our weight on or near the midline of the foot we are by no means perfectly adapted to bipedal locomotion. The purpose of this study is to demonstrate that people naturally assume a non-optimized gait. An experiment is necessary to prove that transmitting our weight to the lateral portions of our feet is ergonomic and efficient.

## BACKGROUND

Walking is generally considered a means to an end. Suppose the intention of walking is a variable which depends on the perception of pressure on the foot. The perception of stepping on the lateral portion of the foot leads to greater balance in standing, walking, and dancing. Learning manifests itself as a systematic procedure of producing a consistent perception of pressure.

## MOTIVATION

Behavior is by definition a reaction to purpose. In order to remove internal stresses and strengthen the kinetic chain, a method of reconfiguring the gait is discovered. Once applied as behavior, the body toughens. This technique is not only a compensatory approach to healing injuries, it is also an applied mechanism for improving sure-footedness while fighting or dancing. In fact, the process was developed specifically for dancing and later utilized as a method of adjusting stance. Reinitializing the center of gravity is the action. It remains to be seen whether robots can be made to walk and dance more successfully with this parameter as the controlled perception.

## DISCUSSION

Perceptual control theory, a theory which should spark a great deal of significant research, was developed to provide a paradigm for research on living things. The most interesting aspect of this particular investigation is that we are referencing both learning and reorganization of walking.