CONFUCIAN GOVERNANCE AND WOMEN'S RIGHTS: NEO-CONFUCIANISM IN EARLY CHOSON KOREA AND THE DEGRADATION OF FEMALE FREEDOMS

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In recent years, Korean women have made significant inroads into their male-dominated, patrilineal society. However, advocates of true equality confront an entrenched culture that for thousands of years has defined a woman's identity around her relationship to men, home and the family. A study of the Choson dynasty (1392-1910 AD) offers a strong explanation for modern Korean gender conventions. The Choson dynasty was founded on the principles of neo-Confucianism, which specifically detail the roles that women and men should assume in a moral society. Due to its duration, strength, recency and the pervasiveness of Neo-Confucian thought it engendered, the Choson dynasty contributed to the foundation of gender socialization in modern Korea.

The Choson dynasty marks a definite decline in the freedoms of women. In the previous Korjo dynasty, women enjoyed a comparatively high degree of autonomy. They could transact business, own land, claim equal inheritance with male siblings, and move about in society with some degree of freedom. As the Choson dynasty unfolded, these and many other freedoms were lost. For example, it became common practice to physically confine women to the interior of their traditional household compounds, to ostensibly protect their chastity and prevent the moral decay of society. This paper will examine the decline of women's rights associated with the establishment of the Choson dynasty and its adoption of neo-Confucianism. The hypothesis is that the decline in women's rights immediately following the transition to the Choson dynasty was influenced by the Choson government's institutionalization of neo-Confucianism. Direct causation cannot be proved, because many factors may have played a role in the decline of female freedoms. Therefore, this paper will juxtapose the decline of women's rights in the economic, public and domestic spheres against the development of Korean neo-Confucianism and its role in the Choson governmental structure.

MATHEMATICAL MODEL OF DIRECTION SELECTIVITY IN PRIMARY VISUAL CORTEX

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The study of the brain has both philosophical and practical motivations and the primary visual cortex is the logical starting point of that study. Microelectrode recording experiments have shown that neurons in primary visual cortex are sensitive to stimulus direction. The existence of a large number of strong lateral recurrent connections in the visual cortex motivates a model employing recurrent neural networks with asymmetric lateral connections to account for the properties of direction selective of cortical neurons. I analyze a nonlinear mathematical model of direction selectivity to investigate the nonlinear dynamics that arise in simple nonlinear neural networks with asymmetric recurrent lateral connections driven by moving input stimuli in order to determine the anatomical and physiological basis for the properties of direction selective neurons. The result is that such networks have stable solutions, called stimulus-locked traveling pulses, whose speed is determined by the speed of the input. Outside a certain regime of stimulus speeds, the stability of the traveling pulse solutions breaks down and another class of solutions arises, lurching activity pulses. The existence of lurching activity pulses provides an experimentally testable prediction that is specific to the explanation of direction selectivity by asymmetric lateral connections.