

### 1.3 System Dynamics Insights and Machiavelli's Perceptions

It is evident in Machiavelli's writings that he conceived of politics in a very systematic fashion. Often we find his conclusions mirrored in present day writings on the behavior of complex dynamical systems. One major concept in the world of system analysis is the idea of instability. Stable systems have a tendency to return to equilibrium when perturbed. However, if forced beyond a certain point, most will fail to return to their original state--and many will begin to quickly diverge from equilibrium. Machiavelli considers the dynamics of urban development in a similar fashion:

"And of these cities, the one which is furthest from order is the most unfortunate, and that one is furthest from it which in its institutions is completely off the straight path which could lead it to its perfect and true goal, because for those who find themselves in this state it is almost impossible that by any happening they can be set on the right path again" (*Discourses*, 176)

When Machiavelli speaks of the state of corruption, he literally means--the energy state of corruption. "A corrupt city which lives under a prince will never be able to regain its freedom." (*Discourses*, 223) One envisions various energy levels at which a political system can exist, as well as the barriers which prevent movement from a lower level to a higher:

Another important concept in system dynamics is the tendency of complex systems to exhibit policy resistance. (Forrester 1961) In these systems, there are a large number of potential negative feedback paths, many of which are latent at any one time. When the system is perturbed, these previously unimportant feedback loops suddenly become operative, causing the system to resist the desired change. Too often in political systems where power is distributed among many, their various opposing interests interact to prevent decisive action from being taken:

"And this should be taken as a general rule; it rarely or never happens that a republic or kingdom is well organized from the beginning, or completely reformed, with no respect for its ancient institutions, unless it is done by one man alone..." (*Discourses*, 200)

Here Machiavelli recognizes that while stability can be an important characteristic for a society, it is first necessary for a people to obtain a desired state--which they wish to maintain--and this requires instability. His solution to the problem of policy resistance is to place all power in the hands of one individual, in effect simplifying the interactions which must take place, making decisive behavior much more likely.

Finally, system dynamics has yielded a large volume of information concerning the

existence of non-intuitive behavior within very complex systems.(Forrester 1961) It is often found that locally rational policies can lead to globally dysfunctional behavior. In short, things are not always as simple as they appear. Machiavelli echoes this feeling:

"...when a problem arises either from within a republic or outside it , one brought about either by internal or external reasons, one that has become so great that it begins to make everyone afraid, the safest policy is to delay dealing with it rather than trying to do away with it, because those who try to do away with it almost always increase its strength and accelerate the harm which they feared might come from it." (*Discourses*, 241)

Within many systems, the structure of interactions is so complex that it is extremely difficult for the policy maker to determine the proper course of action through intuition alone. There are many examples of problems where the obvious solution produces the opposite of the response intended, making the problem much worse. Machiavelli recognized this phenomena and cautioned against overreacting.

## Chapter Two: Machiavelli's Conception of the State

### 2.0 Machiavelli's Assumptions

Machiavelli disregarded absolutes. Ideals such as truth, beauty, right, and God were of little use because of man's imperfection. There is no way that any man could possibly know the absolute truth. As a result, much more weight was placed upon appearances. If an evil man acts like a saint all of his life, how can you tell the difference between the two? In fact, what is the difference between the two? For Machiavelli, the ends justifies the means--not because the means are unimportant, but because we have no idea of what the best means are.

These assumptions have a profound effect upon Machiavelli's political theory. Because there are no absolutes, man is cast adrift. Machiavelli envisions societies with floating values. The best solution is thus his own realistic interpretation of the Aristotelian Mean, not some beautiful synthesis (man did not have the capacity for that), but rather some acceptable compromise. The ideal political system--note that this is a very different definition of ideal from that of the Greeks--is composed of a number of different actors, all with their own biases and agendas. By interacting and compromising, a average policy is settled upon, which results in the greatest common good. However, there is no harmonious happy society at the end of Machiavelli's rainbow. Politics is compromise, not consensus.

Machiavelli makes no attempt to solve political problems in the way an analytic scientist might. He does not believe there is a solution. This marks him as a man ahead of his time. He demonstrates an understanding of human cognitive limitations (i.e. bounded rationality) centuries before the term came into vogue. By accepting the inevitable presence of non-idealities and non-deterministic processes, he is able to abandon the impossible task of optimizing and begin the much more manageable one of satisficing. Machiavelli guarantees happiness for no one. He simply asks the question, assuming some degree of satisfaction is obtainable in this world, which