How adaptive system shall be

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It is bad not to react on changes, but overreacting could be worse. How adaptive system shall be? Well, it is not that simple. There are levels of adaptivity, and there are optimum degrees of adaptivity on each level. Let's list adaptivity levels.

0 - system is not adaptive, aimed on a fixed goal and does not react on changes.

Example: hand does not react on pinprick

1 - system response on reaction

Example: hand draws back on pinprick

2 - system predict future based on previous experience and reacts accordingly

Example: hand draws back before the second pinprick because person remembers the first one

3 - system predicts future based on observation of events occurred to other systems, and correct behavior accordingly

Example: hand draws back before a pinprick because person saw other person's reaction on a pinprick

4 - system predict future based on experience shared by other systems, and correct behavior accordingly

Example: hand draws back before a pinprick because somebody told the person, that she experienced a pinprick, and that was not much fun

5- system takes into account sub-system and super-system factors

What sub-system and super-systems are? Country is super-system for a person, while person is sub-system for a country. Super-system sets goals, applies some rules and restrictions to sub-systems. Sub-system can set goals to super-system too, but super-system deals with many sub-systems and cannot keep all of them happy, plus it has it's own goals. Malfunctioning of sub-system can cause problems to super-system (example: flat tire)

Example (super-system): If person breaks the law, she might get jailed
Example (sub-system): Smart girls know, that their beauty will eventually fade out, and try to used it before it is gone.

6 - system takes into account s-curve phase and negation (negation means, that system of values will change, and system will pass through qualitative transformations)

Example: Person knows, that time immediately after revolution in a country is very dangerous.

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When person sees, that risk of revolution is very high, she might consider moving out of country.
Example: Person knows, that when she start the first job, or get retired, or get married, or her life will change significantly, and new problems will arise, and prepare for it proactively.

7 - system takes into account chains of negations, i.e., system studies genesis of systems and prepare accordingly

Example: if person understands cycle larva - caterpillar - chrysalis - butterfly, she will not just prepare leaves for a caterpillar, but will start looking for a cage for a butterfly.

8a - vertical fields - system studies genesis of sub- and super-systems, and reacts pro-actively based on expected consequences qualitative transformations.

Example: in the Eastern Europe, decision whether to escape mandatory military service depends on country's plans to join NATO.

8b - horizontal fields - system studies genesis of neighbor systems, and predicts how qualitative transformations of neighbors' neighbors will affect the neighbors, and how it will affect the system

Example: Bob loves Alice, Alice likes Charlie; Alice and Bob are going to go to a college, Charlie is going to go serve in military. When Charlie will come back from military, he will be good-looking and attractive for current Alice. But by that time Alice will change too, and she will prefer then-smart Bob - Charlie might look good by then, but his military stories will be boring for then-smart Alice. System becomes more interesting if Alice has a pacifist friend.

9 - volumes - system studies genesis of sub-systems and super-systems of neighbors

Example: If Alice and the guys are in Eastern Europe, and the country will become part of NATO in a year or two, while college give diplomas for everybody who pays, and loose creditability by then, 8b case consequences will change to the opposite.

What is the bottom line? For simple cases, lover levels are sufficient. For strategic planning, take all the levels into consideration. There is some optimum degree of adaptivity on each level - do not overreact. Over-adaptivity causes oscillation.