Various phenomena became observable in metallic glasses recently as a result of computational and experimental studies. They changed our viewpoint and enhanced our understanding about these materials. These happen as a result of impulse of many external stimuli (heat, load, light or combination). It is however, unclear which one is most effective at given point, scale or range. An analysis is performed to understand and explain their role and propose strategies (such as use of design of experiments) for improvement in properties and processing. Relaxation happens as a result of structural change. Devitrification is result of heating. Rejuvenation may happen because of heat (thermal), force (mechanical) or combination (thermo-mechanical). Recrystallization is not observed while ordering and liquid - liquid transition has become observable recently due to Synchrotron studies. In some cases, the extent of these phenomena may become the reason of development of bulk metallic glass matrix composites.