



Young Forests & Young Professionals – Resilience, Adaptation, and the Openness to Change

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Outline of this Presentation

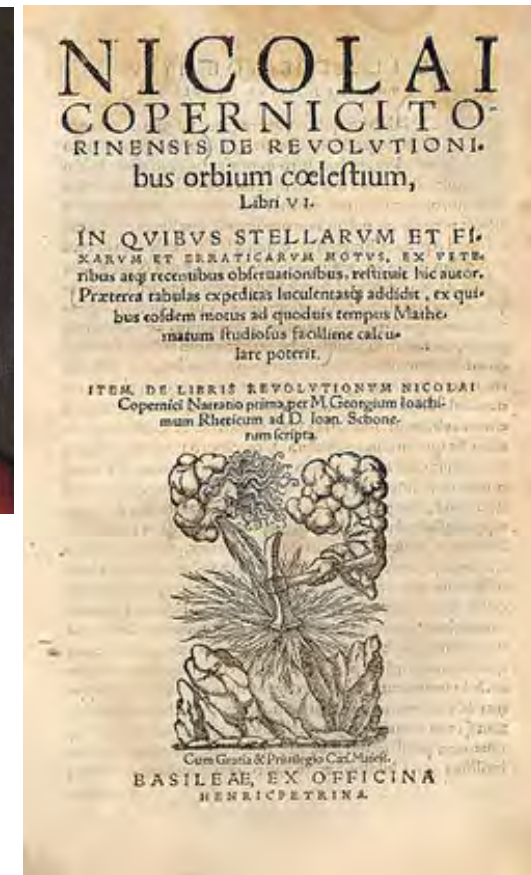
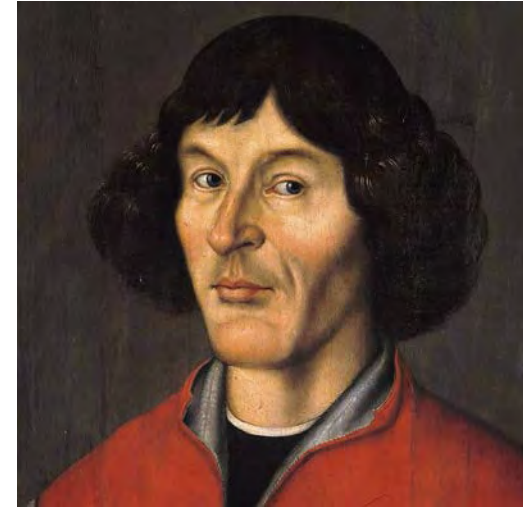
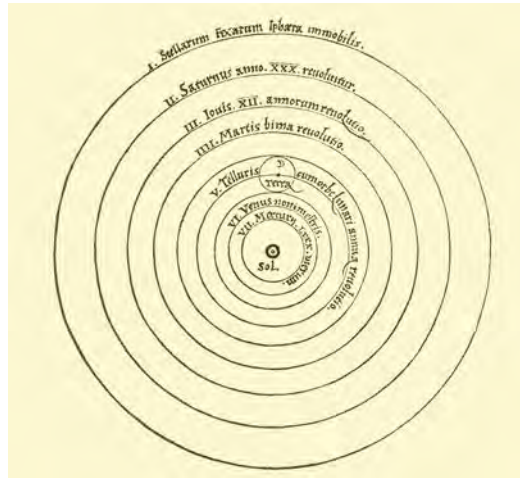
- Place the theme of the meeting “Growing Young Forests and Young Professionals” into a philosophical and historical context
- Dualism and the four horses of the apocalypse
- Dualism in forestry: preservation vs. conservation, managing for “the good of the land” vs. “the good of society”
- Outlook for the role of young professionals

Philosophical and Historical Context

- **Dualism** – involves an eternal tension between two opposed principles
- **Challenge:** overcoming seemingly intractable contrasts between opposing views

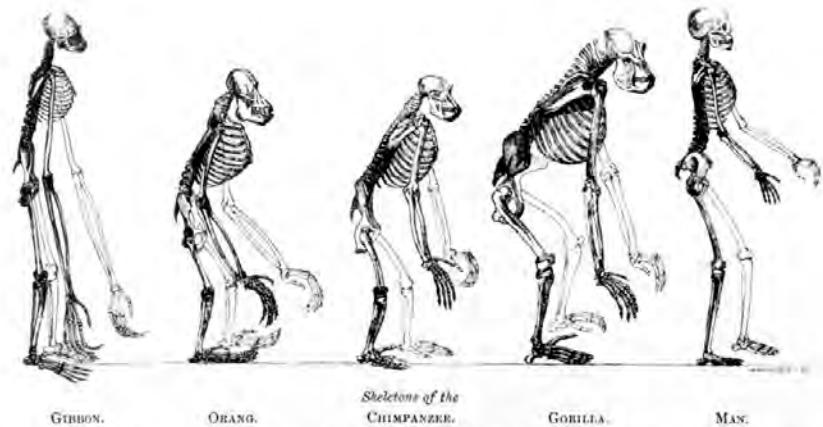
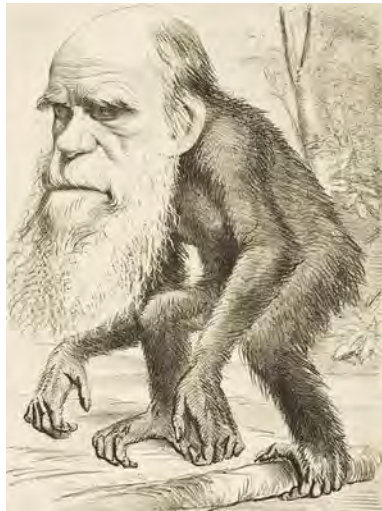
Dualism in History

- Nicolaus Copernicus (1473–1543)
- *De revolutionibus orbium coelestium* (1543)

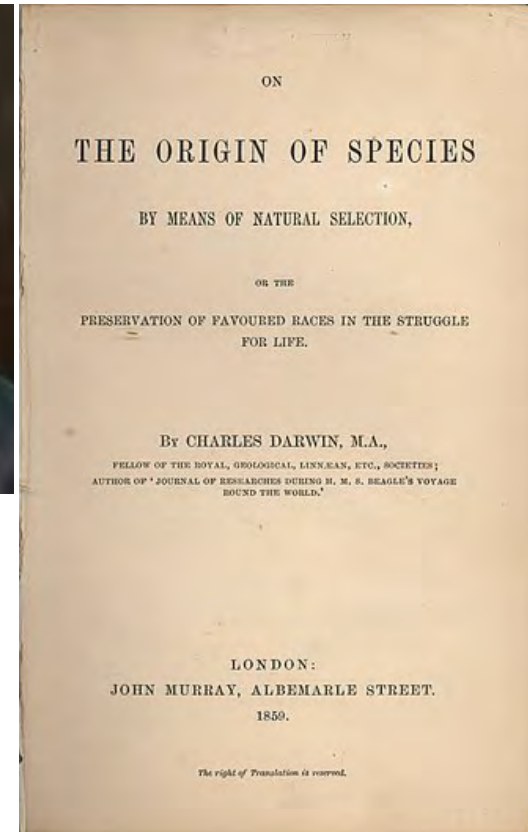
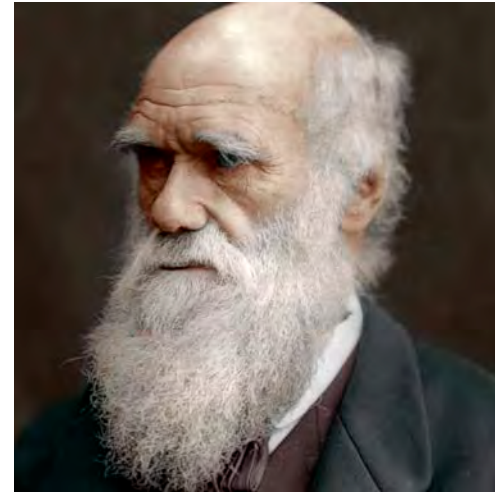


Dualism in History

- Charles Darwin (1809–1882)
- *The origin of species* (1859)

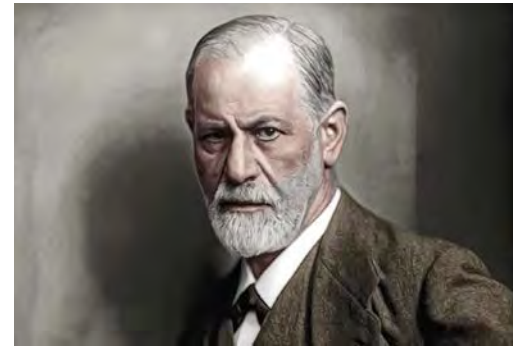
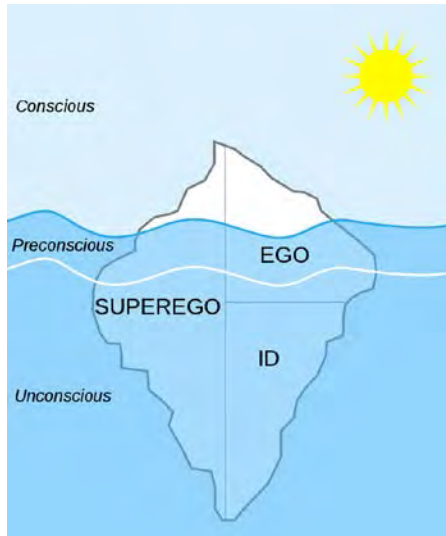


Photographically reduced from Diagrams of the natural size (except that of the Gibbon, which was twice as large as nature), drawn by Mr. Waterhouse Hawkins from specimens in the Museum of the Royal College of Surgeons.



Dualism in History

- Sigmund Freud (1856–1939)
- *The ego and the Id* (1923)



The Four Modern Horses of the Apocalypse

- **Relativism** – denies claims to objectivity, asserts that facts are relative to the perspective of the observer or the context
- **Denialism** – choice to deny reality to avoid a psychologically uncomfortable truth; essentially irrational action of refusing to accept empirically verifiable historical experiences or events

The Four Modern Horses of the Apocalypse

- **Agnotology** – the study of deliberate, culturally-induced ignorance or doubt, typically to sell a product or win favor, particularly through fake news
- **Anti-science** – rejection of science and the scientific method as an objective method that can generate universal knowledge

Dualisms in Forestry and the Role of the Forestry Professional

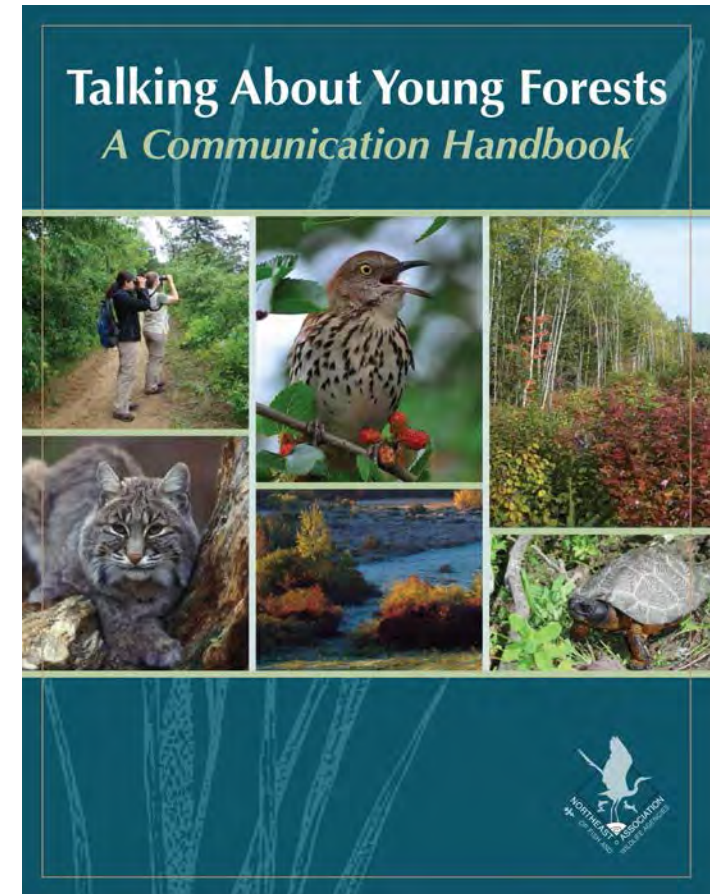
- Muir vs. Pinchot or preservation vs. conservation
- Managing “for the good of the land” vs. “for the good of people”
- Dominant use vs. multiple-use
- Professionalism vs. societal values

The Role of the Forestry Professional

- Behan, R.W. 1966. The Myth of the Omnipotent Forester. Journal of Forestry.
- Brunnell, F.L. 1976. The Myth of the Omniscient Forester. The Forestry Chronicle.
- Luckert, M.L. 2006. Has the Myth of the Omnipotent Forester become the Reality of the Impotent Forester? Journal of Forestry.

When Talking about Young Forests

- “Technical terms that won’t be understood or, worse yet, will turn people off, such as silviculture, forestry or sustainable land management”



Multiple Use Requires More Than “Good Forestry”

- ... the forester’s mantra was, far too often, that “good forestry is good wildlife management.” That chant – repeated over and over – was widely accepted. Foresters clung to that adage long after the emerging science clearly showed otherwise... (Jack Ward Thomas, former Chief, US Forest Service 2002)

Overcoming the Perennial Dualisms

- To “see the forest for the trees” (John Heywood, 1546), foresters see the forest as a collection of **stands**
- **Stand or area-based focus**
 - yield tables, full-stocking, Faustmann (1849) formula for land expectation value / optimal harvest age,
 - uniform stand-level treatments (e.g., uniform shelterwood, thinning from below)

Orientation toward a more Ecological Silviculture

	Vegetation height	Canopy closure	Structural diversity	Coarse woody debris (CWD)	Browse production	Plant diversity	Animal diversity
Grasses & forbs	*	*	*	*****	*	***	**
Shrubs	**	**	**	****	*****	****	*****
Open saplings (poles)	***	***	****	**	***	****	****
Closed poles & sawtimber	****	*****	**	**	*	*	*
Large sawtimber	*****	****	***	**	**	***	***
Old growth	*****	****	*****	*****	***	*****	****

Definitions of Forestry

- **SAF Definition:** The science, art, and business of creating, managing, and conserving forests and associated resources in a sustainable manner to meet desired goals, needs, and values.
- **Freebase definition:** Forestry is the science, art, and craft of creating, managing, using, conserving, and repairing forests and associated resources to meet desired goals, needs, and values for human benefit. ...

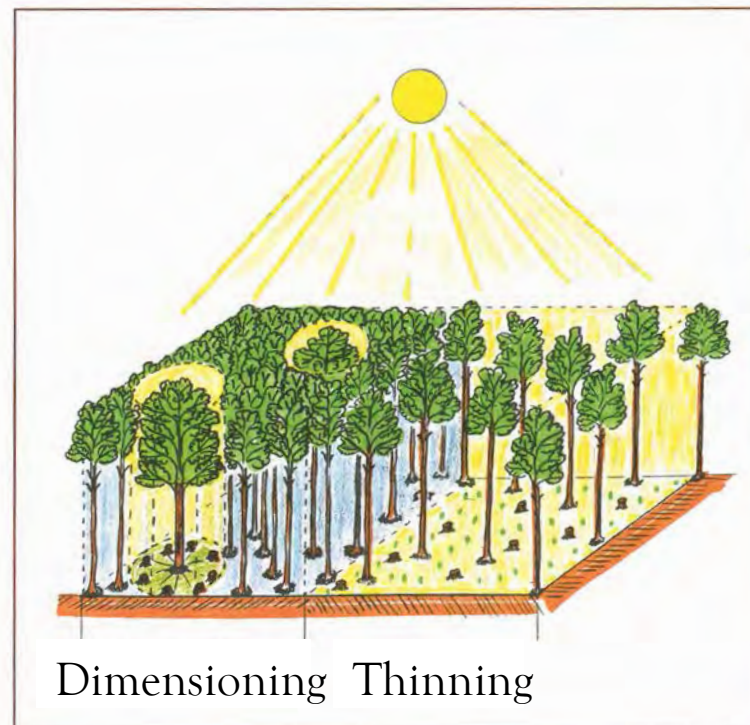
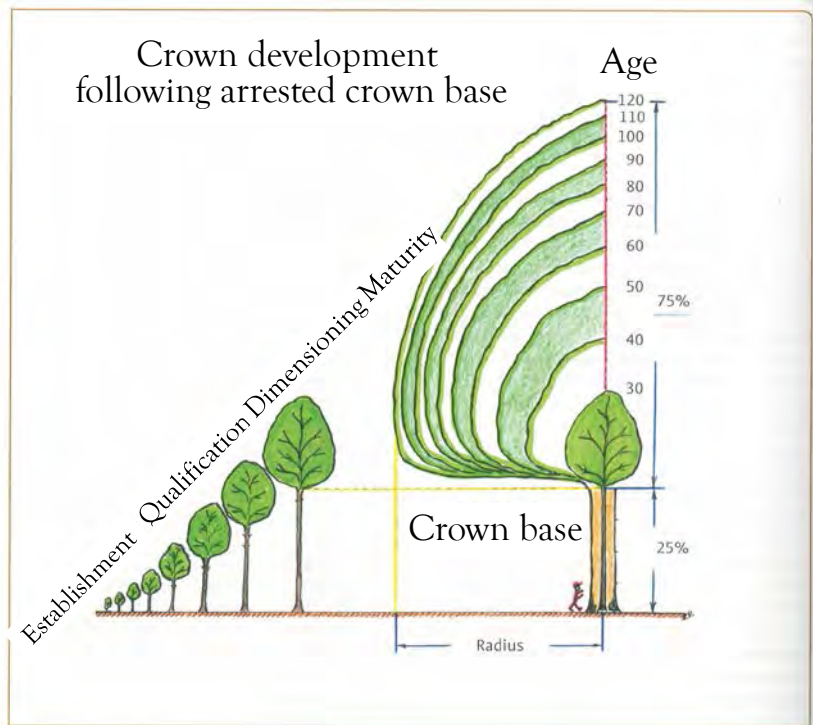
Definitions of Forestry

- The main **goal** of forestry is to create and implement systems that manage forests to provide environmental supplies and services. The **challenge** of forestry is to create systems that are **socially accepted** while **sustaining** the resource and any other resources that might be affected. **Modern forestry** generally embraces a **broad range of concerns**, including **ecosystem services** by assisting forests to provide **timber** as raw material for wood products, wildlife **habitat**, natural **water quality** management, recreation, landscape and community protection, **employment**, **aesthetically** appealing landscapes, **biodiversity** management, **watershed** management, **erosion control**, and preserving forests as '**sinks**' for **atmospheric carbon dioxide**.

A Less Stand-Oriented Silviculture – On the Matrix



A Less Stand-Oriented Silviculture – Q/D (Qualification / Dimensioning)



A Less Stand-Oriented Silviculture – On the Matrix

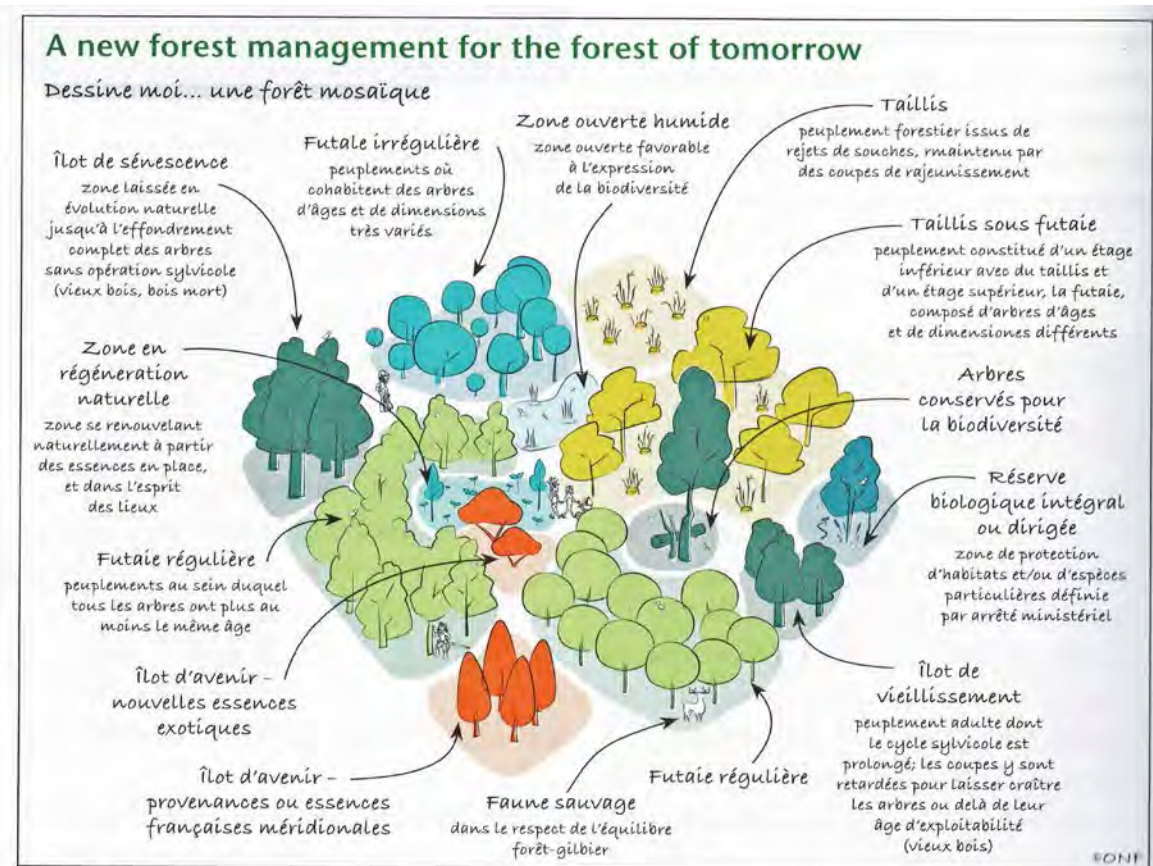


Abb 1 Der mosaikartige Wald kombiniert unterschiedliche Funktionen und Bewirtschaftungsarten für den Wald von morgen. Illustration: Office National des Forêts

Managing for Societal Welfare

- **Ecological resilience** – degree of perturbation that an ecosystem can absorb without essentially changing its self-organizing processes (e.g., nutrient cycling, biomass production), structures, and feedbacks (i.e., a stable state)
- **Adaptation** – adjustment of an organism to its environment to improve its chances of survival

The Contest of Whose Values and Opinions Win

- TOP ENVIRONMENTAL GROUPS CALL ON BIDEN TO PROTECT MATURE TREES AND FORESTS ON FEDERAL LANDS FROM LOGGING (<https://www.washingtonpost.com/politics/2022/02/15/top-environmental-groups-call-president-biden-protect-mature-trees-forests-federal-lands-logging/>)
 - Environment America, the Sierra Club, Center for Biological Diversity, Natural Resources Defense Council and Wild Heritage
 - Demand that the U.S. Forest Service begin crafting a rule to protect all old-growth trees on federal lands from logging.

Openness to Change

<https://oxford-review.com/oxford-review-encyclopaedia-terms/openness-to-change/>

- Necessary **conditions** for successful planned change (Miller et al. 1994, p. 60):
 - **Acceptance** and **conscious awareness** of the **need** for change
 - **Willingness** to **support** the change
 - **Positive emotions** towards either the **change** or the potential **consequences** of the change
 - An **appetite** or **drive** to **enact** or be **involved** in the change



Factors that Shape Openness to Change

(Armenakis, A. and Bedeian, A. G., 1999)

<https://oxford-review.com/oxford-review-encyclopaedia-terms/openness-to-change/>

- How a person perceives:
 - Content – substance of the change;
 - Context – existing drivers and conditions;
 - Process – actions undertaken to enact change;
 - Criteria – outcomes assessed following change.

5 Predictors of Openness (Devos et al. 2007)

<https://oxford-review.com/oxford-review-encyclopaedia-terms/openness-to-change/>

1. The **perception** of **threat** that **change** presents to the individual (content related)
2. The level of **trust** an individual has in the **organization** or **leadership** to **handle the change well** (context related)
3. The level of **trust** the individual has in their immediate manager (supervisor) (context related)
4. The individual's **experience** or **history** of **previous change events** (context related), and

5 Predictors of Openness (Devos et al. 2007)

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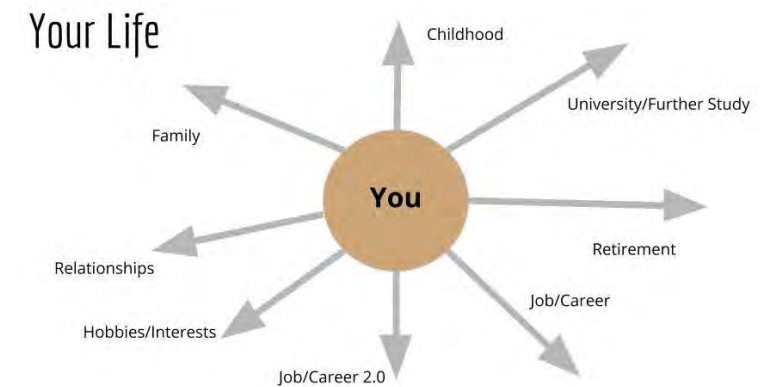
5. The **level** of **participation** or **sense** of **control** an individual perceives they have in the change effort and direction (process related)

■ Openness to Change is thus largely based on an individual's (Aronson et al. 2006) :

■ **Personality**

■ **Values**

■ **World view** – perceptions, comprehension, and interpretation of the world



Thank You for Your Attention

- Any questions if there is still time?