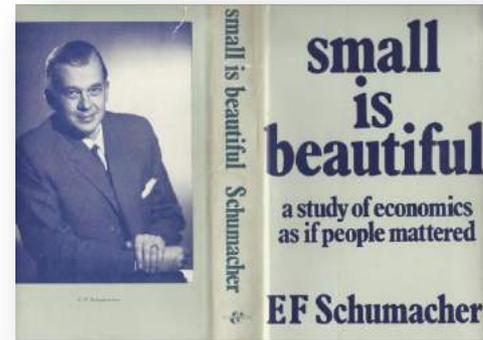


The  Schumacher Institute
for sustainable systems



E. F. Schumacher, 1911 - 1977

Economics as if people mattered

Human scale - appropriate technology



A think tank



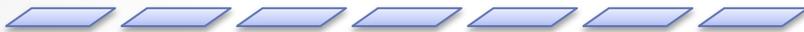


A viable organisation manages all of these:

Activity – it does things



Identity – who we are



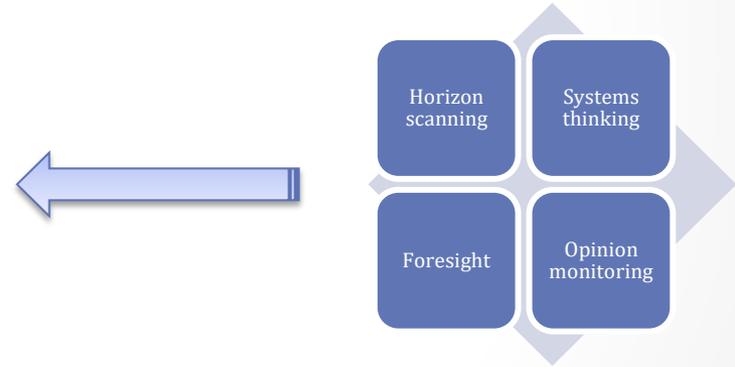
Synergy – co-operation



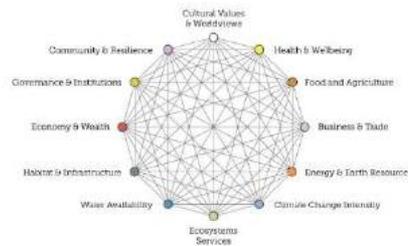
Conflict resolution - competition



Monitoring the external environment



Looking out for what is coming towards you is vital for survival and for innovation



- Bristol Resilience Network
- Rockefeller 100 Resilient Cities Network
- 23 workshops so far
- Business Resilience Circles



AVON
FIRE & RESCUE

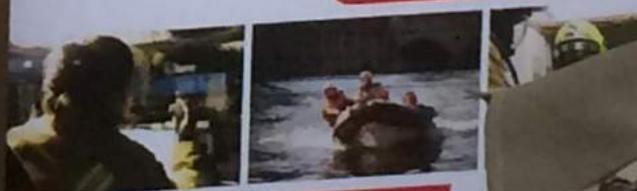
Improving public safety by:



PREVENTING

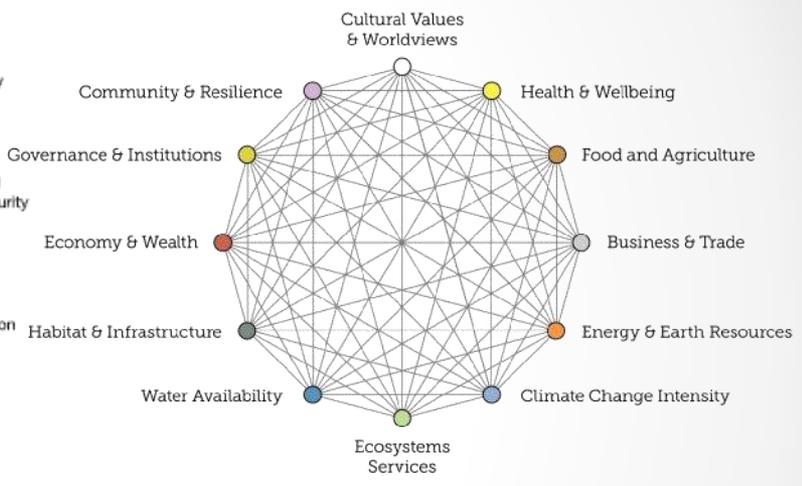
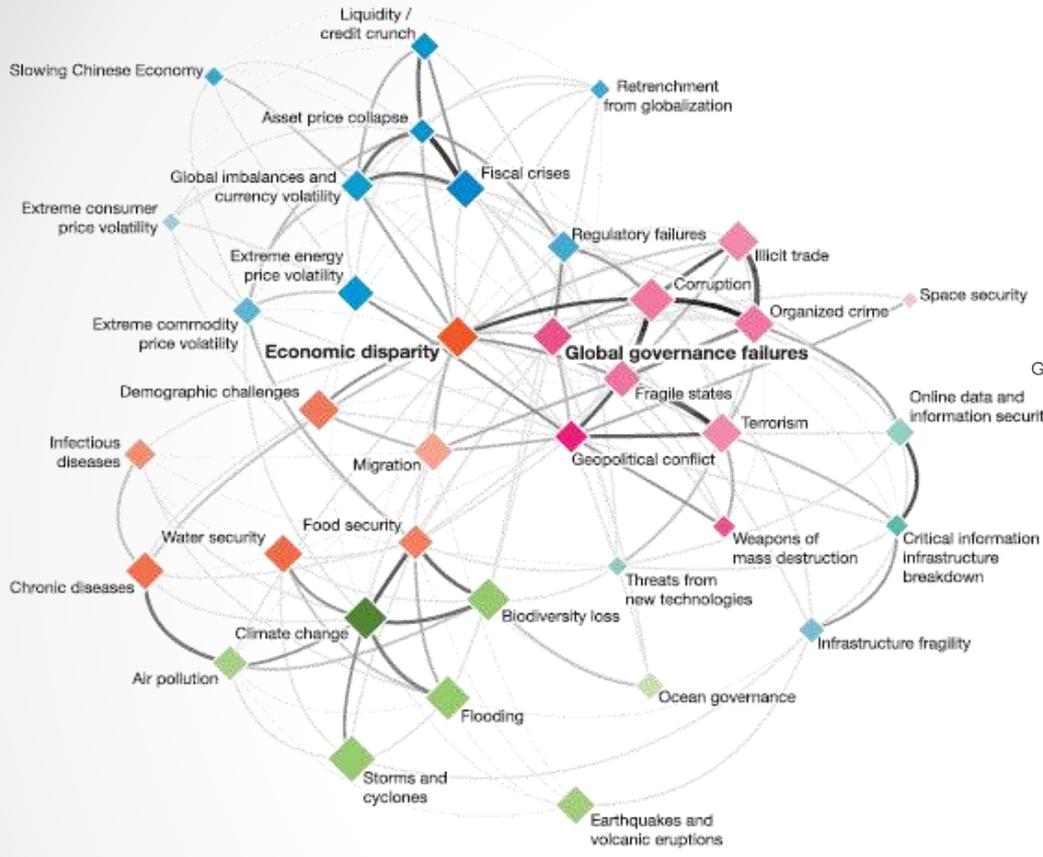


PROTECTING

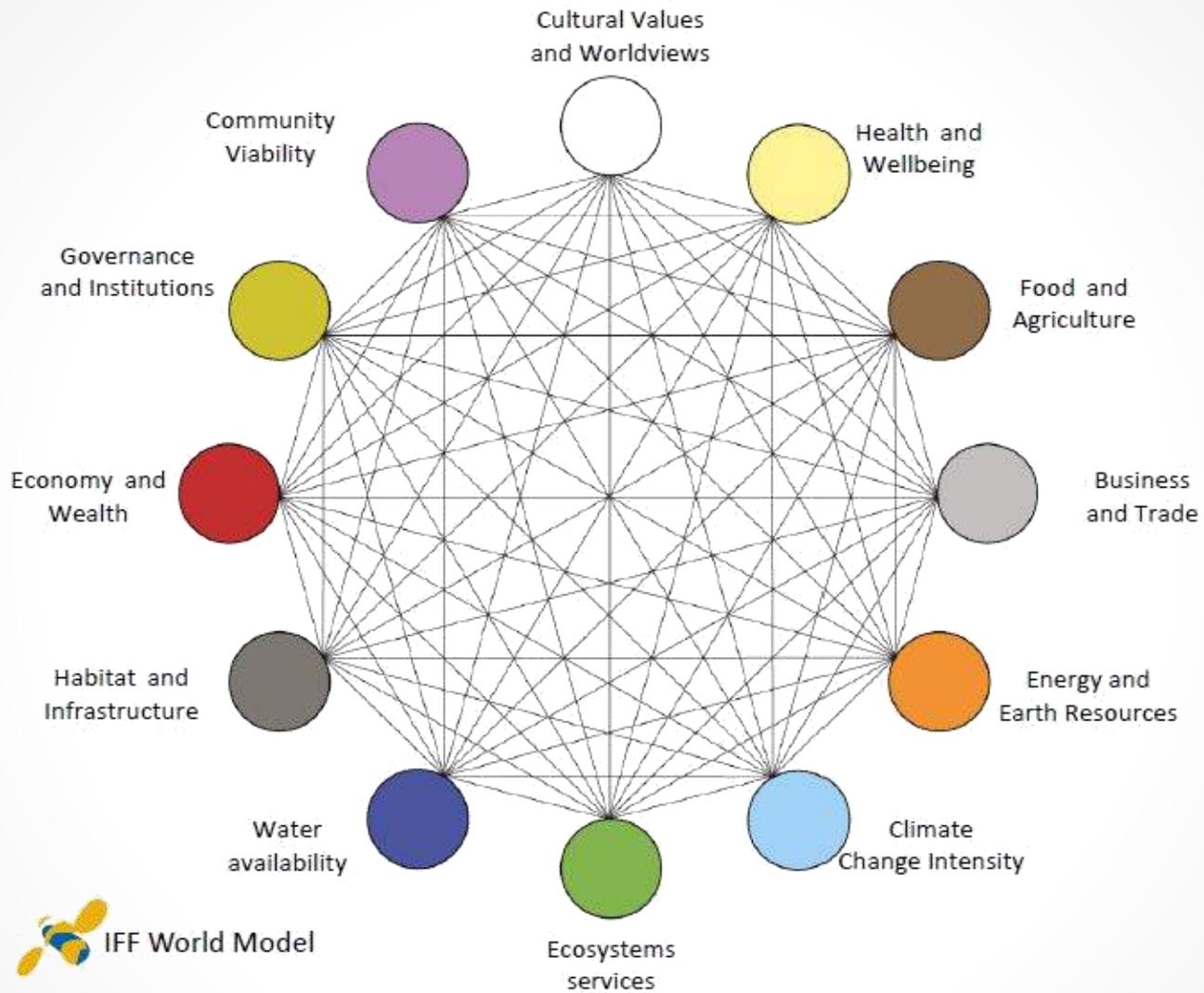


RESPONDING



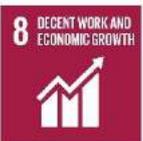


We have to address all complex issues as a whole





SUSTAINABLE DEVELOPMENT GOALS



Ensure availability and sustainable management of water and sanitation for all

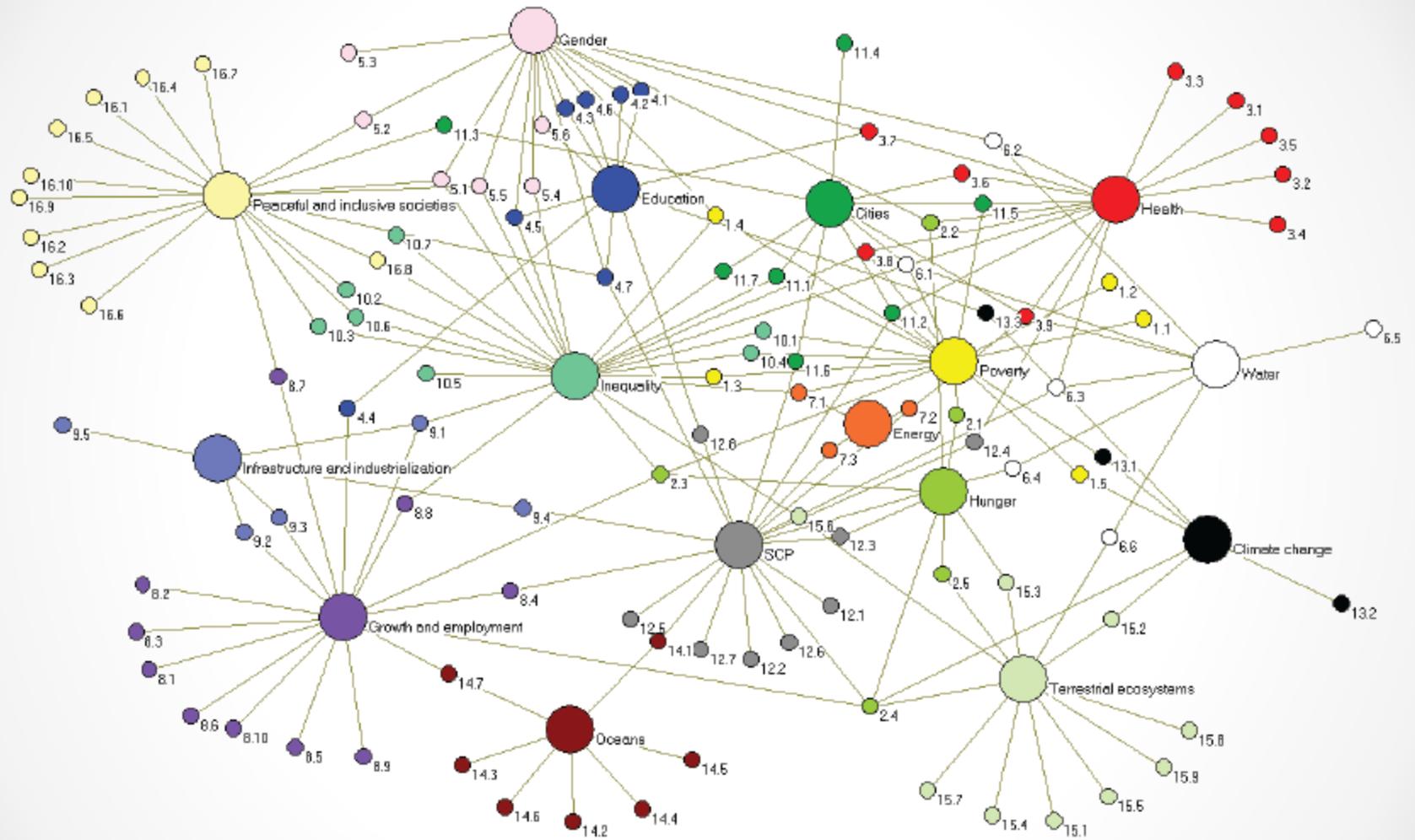


- 6.1 Achieve universal and equitable access to safe and affordable drinking water for all
- 6.2 Achieve access to **adequate and equitable sanitation and hygiene** for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations
- 6.3 Improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally
- 6.4 Substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially **reduce the number of people suffering from water scarcity**
- 6.5 Implement integrated water resources management at all levels, including through **transboundary cooperation** as appropriate
- 6.6 Protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes
- 6.a Expand **international cooperation** and capacity-building support to developing countries in water- and sanitation-related activities and programmes, including water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies
- 6.b Support and strengthen the **participation of local communities** in improving water and sanitation management



11.5 significantly reduce the number of deaths and the number of affected people and decrease the economic losses relative to GDP caused by disasters, **including water-related disasters**, with the focus on protecting the poor and people in vulnerable situations

11.b by 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015-2030, **holistic disaster risk management** at all levels





Resilience is one of the key political categories of our time

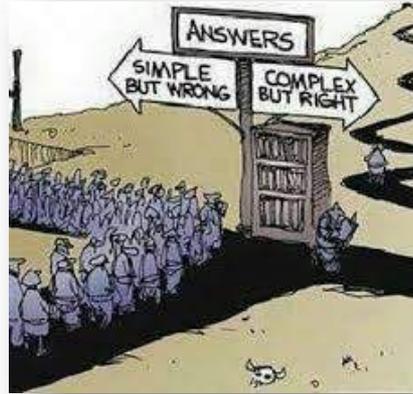
Resilience is now the top priority for the sustainable development and international development aid agenda.

It is key to international security concerns, from cyber conflict to the war on terror, and vital for disaster risk reduction, conflict prevention, climate change and social, economic and institutional development.



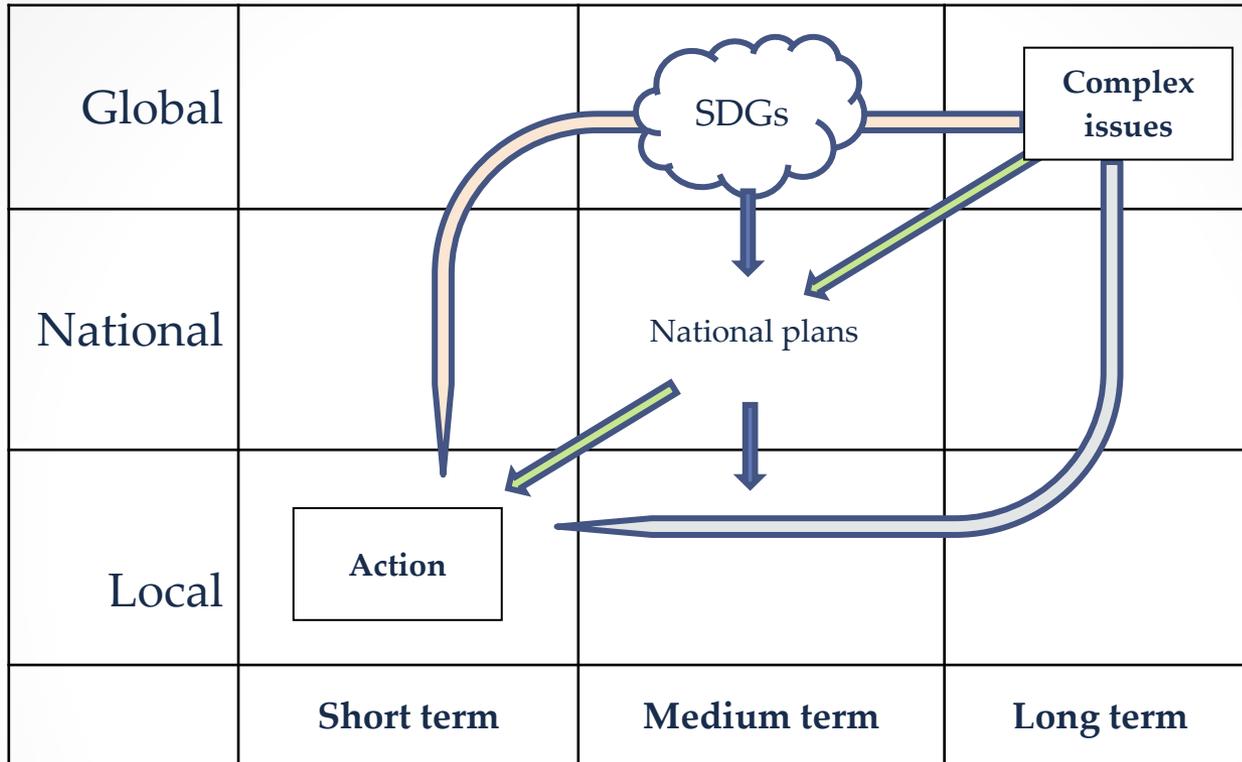
*“[Policy making] is a collection of choices looking for problems; issues and feelings looking for decision situations in which they might be aired; solutions looking for issues to which they might be the answer; and decision makers looking for work. Problems, solutions, participants, and choice opportunities flow in and out of a **garbage can**, and which problems get attached to which solutions is largely due to chance”.*

Cohen et al 1972



There are five characteristics of complexity that are apparent in the garbage can:

1. Systemic: everything is connected
2. Context specific: each situation is unique and details matter
3. Path dependent: history matters; what happens depends on the particular sequence of events that has led to the current situation.
4. Episodic: change goes in 'fits and starts' - how resilient is the current situation to events/chance/actions/wider change.
5. There are limits to knowledge: what emerges cannot be known in advance.



The proximity grid

Different routes from the 'there and then' to the 'here and now'.



**RESILIENT
COMMUNITIES?**

The case for 'resilience thinking' in delivering the global goals

*'Global health threats, more frequent and intense natural disasters, spiralling conflict, violent extremism, terrorism and related humanitarian crises and forced displacement of people **threaten to reverse** much of the development progress made in recent decades.'*

United Nations. Transforming our world: The 2030 agenda for sustainable development

Critical systems thinking

Resilience thinking ignores the political dimension and tends to “mask power relations, contradictions of interest and inequalities.”



Disaster prevention and management results in narrow responses because it does not challenge the causes of vulnerability.

Resilience could be “radical and subversive” but unless the imbalance in social and economic powers are addressed, working for resilience will merely maintain the power structures that have contributed to vulnerability and may merely help those who have been made more vulnerable cope and survive the impacts.



Resilience is one of the key political categories of our time

From the perspective of resilience thinking, we need to reject imposing top down goals and direction on the world and instead find goals in processes, practices and communicative interactions.

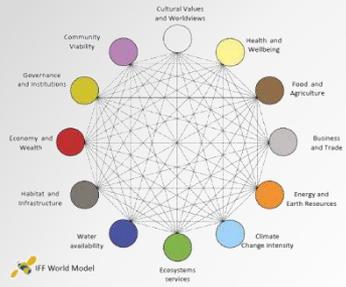
People are better adapted to the future than are social institutions and their representatives.

Complex life can only be governed through the micro-knowledge and micro-tactics of those most in touch with reality.

The language of recommendations

	Propose	Cease
Awareness	Inform, educate, critique	Unlearn, forget, remove preconceptions and bias
Approval	Support, sanction, judge, endorse, back, promote	Disapprove, remove support, censure
Counsel	Guide, encourage, steer, urge	Discourage, steer away, conceal
Advocacy	Instruct, propose, advise, suggest, order, direct, campaign, defend, lobby for	Reject, oppose, warn, lobby against





End

