

**Collective Intelligence as a Field of Multi-disciplinary Study and Practice**  
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In this paper we define intelligence as the ability to interact successfully with one's world, especially in the face of challenge or change. Human intelligence involves gathering, formulating, modifying, and applying effective knowledge -- often in the form of ideas, images, sensations, patterns of response and sense-making -- a process we refer to with words like learning, problem solving, planning, visioning, intuition, understanding, creativity, etc.

Anyone seeking to generate more effective groups, organizations, institutions, healthy communities and sustainable societies soon discovers that individual intelligence is an insufficient factor in their success. We need to explore collective intelligence and how it can address the unprecedented challenges of the 21st century. The global scale, interconnectedness, and potential impact of those challenges makes such exploration more than a matter of convenience and competitiveness. It is a matter of collective survival and potential evolutionary leaps.

### **What collective intelligence is**

Collective intelligence is older than humankind itself. Here is a broad, straightforward definition:

Collective intelligence is any intelligence that arises from -- or is a capacity or characteristic of -- groups and other collective living systems.

Primal forms of collective intelligence manifest in the synergies and resilience of ecosystems. This is often referred to as "the wisdom of nature", which "learns from its experience" through the interactive create-and-test dynamics of evolution. Collective intelligence becomes more obvious in groups of social animals like ants, bees, certain fishes and birds, and many mammals, including wolves and primates. Members of the first human groups shared with those evolutionary ancestors the instinct to combine their respective information and expertise to meet survival tasks they could not possibly meet separately.

Those early forms of collective intelligence gave rise to language and tools which, in turn, enabled new forms of collective intelligence to evolve that were capable of absorbing more complexity. In today's world, collective intelligence serves diverse functions, comes in diverse forms, and has many diverse names. For example, there is statistical collective intelligence, also known as the "wisdom of crowds" (named after the book with the same title), in which people simply "act in their own self-interest by playing the game to win", and their compounded

decisions keep markets running in a self-organized way. This is a useful example because markets can also generate disasters, so it behooves us to understand what is needed for collective intelligence to be benign.

## **Collective intelligence and the human condition**

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When we carefully investigate the problems we face in the world today, we seldom find that individual evil is a central cause. More often we find basically good, intelligent people collectively generating discord and disaster -- in families, groups, organizations, nations and the world. Meanwhile, in their own lives, from their own perspective (and usually that of their loved ones), most of them are doing perfectly good, decent things.

Think about the best and worst meetings you've attended. Think about Congress or Parliament. Think about how activist groups and corporate boards make decisions. Think about how the Bush administration planned for the Iraq war -- and what happened then.

All around us we see evidence that groups of people are often less intelligent -- and occasionally more intelligent -- than their members are as individuals. This is collective intelligence and collective stupidity at work.

Collective intelligence and collective stupidity have little to do with how smart the individual members of a group are. Groups of very bright people can be collectively stupid (a phenomena Irving L. Janis called "groupthink") -- whereas very ordinary or dull people can, under the right circumstances, generate real wisdom.

Clearly individual intelligence is not enough. And neither is simple collected intelligence -- individual intelligences added together. If we wish to successfully deal with the various social and environmental challenges we face today, we need to develop far more collective intelligence as a society and as a global civilization -- and then apply it with wisdom.

## **Collective intelligence and wisdom**

As is clear from the operations of many markets, political systems, and organizational activities, collective intelligence is not necessarily wise. In relation to intelligence, wisdom can be viewed as an expanded perspective and motivation that embraces more of the whole of the situation being considered. Collective intelligence is wise, then, to the extent it successfully embraces whole systems in all their complexity and contexts; the interests, capacities and perspectives of all stakeholders and of the systems, themselves; full, relevant, and nuanced information about the situation; the whole of who we are as human beings; any emergent realities and creative possibilities; and so on. The more that intelligence -- whether individual or collective -- embraces the whole of relevant reality, the wiser we can consider it to be.

## Collective intelligence as an evolutionary capacity

We can view collective intelligence through a developmental perspective that suggests we can and should evolve towards greater wisdom. A particular form of collective intelligence can be said to be more evolved than others to the extent it successfully addresses more of the inherent complexity in the situations it encounters, and can increase its capacity to do so in subsequent situations. In this evolutionary context, we can describe collective intelligence as follows:

Collective intelligence is the capacity of human communities to evolve towards higher order complexity and harmony, through such innovation mechanisms as differentiation and integration, competition and collaboration.

The capacity of groups to evolve is a compound capacity and can be augmented by activating any or all forms and functions of collective intelligence, in any of the realms in which it is defined. Different functions selected for augmentation have different impact on the whole repertoire of functions. (See more about this in the Wheel of Evolutionary Fitness.)

Practitioners, students and advocates of collective intelligence can advance the evolution of this shared field by remembering that all forms/levels/fields of collective intelligence (see attachment) co-exist and contribute. One does not replace the others, any more than TV replaced radio or the internet replaced TV -- although later forms do change the context and role of earlier forms.

## What collective intelligence can do

Depending on which approaches we consider, collective intelligence offers different benefits. The promise of bringing all approaches together is that collective intelligence could offer all these benefits, such as:

- supporting the healthy functioning of groups and communities
- sustaining and revitalizing societies and cultures
- increasing innovation, productivity and profit for companies
- healing conflicts and solving social and environmental problems
- bringing breakthroughs, insights and inspiration to individuals and groups
- providing broad-spectrum, widely available, continually evolving information
- sensing emerging futures and predicting events better than experts
- ameliorating collective stupidities like “groupthink” and “mob rule”
- helping groups learn, and improving collective awareness and behavior

- facilitating the emergence of new social forms and functions
- developing into a “global brain” or “noosphere”
- evoking significant transpersonal experiences

### **Why the "collective intelligence" meme is rising so rapidly**

The idea of "collective intelligence" is spreading through hundreds of thousands of web pages that contain it, numerous books, professional meetings, online discussions, and informal conversations. 25 years ago hardly anyone was talking about it. Today "collective intelligence" is such a common a phrase that Google lists over a million pages using it (up from 500,000 last November and 50,000 the year before that) -- as well as hundreds of thousands of other pages using comparable terms like "collective IQ," "collective wisdom," "community intelligence," "group intelligence," and so on. A major milestone in the evolution of the CI field was the establishment of the MIT Center for Collective Intelligence, October 13, 2006.

Why all this is this happening? -- and why now? We suggest that, as complexity and crises increase, more people and institutions are recognizing that our collective intelligence -- at every level, and especially in its wiser forms -- has tremendous potential to produce positive change and even turn major breakdowns and crises into evolutionary breakthroughs.

Thus collective intelligence is a holy grail of social change and social creativity. If we could better understand how to support it, increase it and facilitate it, we would be more able to effectively co-create a better world. Doing that, of course, involves significant political, economic, social, cultural, organizational and spiritual challenges. But the rewards, when these challenges are successfully engaged, are tremendous.

### **Convening the Perspectives and Practices of Collective Intelligence**

As we have noted, different people mean different things when they speak of collective intelligence. As a field of study and practice, it did not exist prior to its current investigators. Those relatively independent investigators have started from different assumptions, addressed different phenomena, and developed different approaches that, on the surface, may appear to be unrelated. Increasingly, however, these diverse facets of the field are beginning to intersect at their edges where practitioners or theoreticians are not constrained by one perspective or approach, and find related ideas and practices useful.

We believe that it is time to think of collective intelligence as a generic capacity that is vital for our times -- and to consider all perspectives on all related phenomena and all the methods derived from them, to be potentially valuable to an integrated field of collective intelligence. The task before us is to find ways to bring the people, ideas and practices of this field together and to weave the field into something coherent which can then be promoted to and used by

humanity at large to deal with its challenges and support its evolution into more sane, wise, and functional forms of civilization.

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