Global Social Transformation

All of us, as a society, are witnessing an extraordinary historical transition between the Industrial Age and the Information -- or Digital Age.

When a society's fundamental technologies change and its economy begins to transform, the political and social institutions inevitably follow.

In this new era, nothing will be as important as education. The current educational systems of the developed world -- suited to the requirements of the masses of the Industrial Age -- is becoming obsolete. We, and our children, need to be prepared.

With multimedia personal computers, learning will become interactive and individualized.

The man-in-the-street and politicians alike are asking the same questions -- where are we and where are we going?

From a flyer of TELECOM Interactivity 97 of ITU

Dawn of 21st Century

1. Digitalization
Analog to Digital

2. Globalization
Local to Global

3. New Economy
Obedience to Creativity

Rainbow Bridge Across the Pacific
太平洋に架ける虹の橋

Book of John (1:1)

εν αρχη, ην ο λογοσ,
(beginning)   (Word)

In the beginning, there was Word,

και ο λογοσ ην προσ τον θεον,
(and)   (Word)   (with)   (God)

and   the   Word   was   with   God,

και θεοσ ην ο λογοσ.
(and)   (God)   (was)   (Word).

and   God   was   the   Word.

Logos

1. Soul, God, Truth   ⟶   Religion

2. Greek origin of logic   ⟶   zero (0) and one (1)

                         ⟶   Computer

God created the integers and the rest is the work of man.
Famous mathematician, Kronecker
The New York Times, October 23, 1988

3. Word   ⟶   Communication

                         ⟶   Internet

Five Pillars of Information Age

- Numbers are used to represent all information.

- These numbers are 1s and 0s.

- Computers transform information by doing arithmetic on these numbers.

- Communication systems move information around by moving these numbers.

- Computers and communication systems combine to form computer networks. Computer networks are tomorrow's information infrastructures, which in turn are the basis of the Information Marketplace.
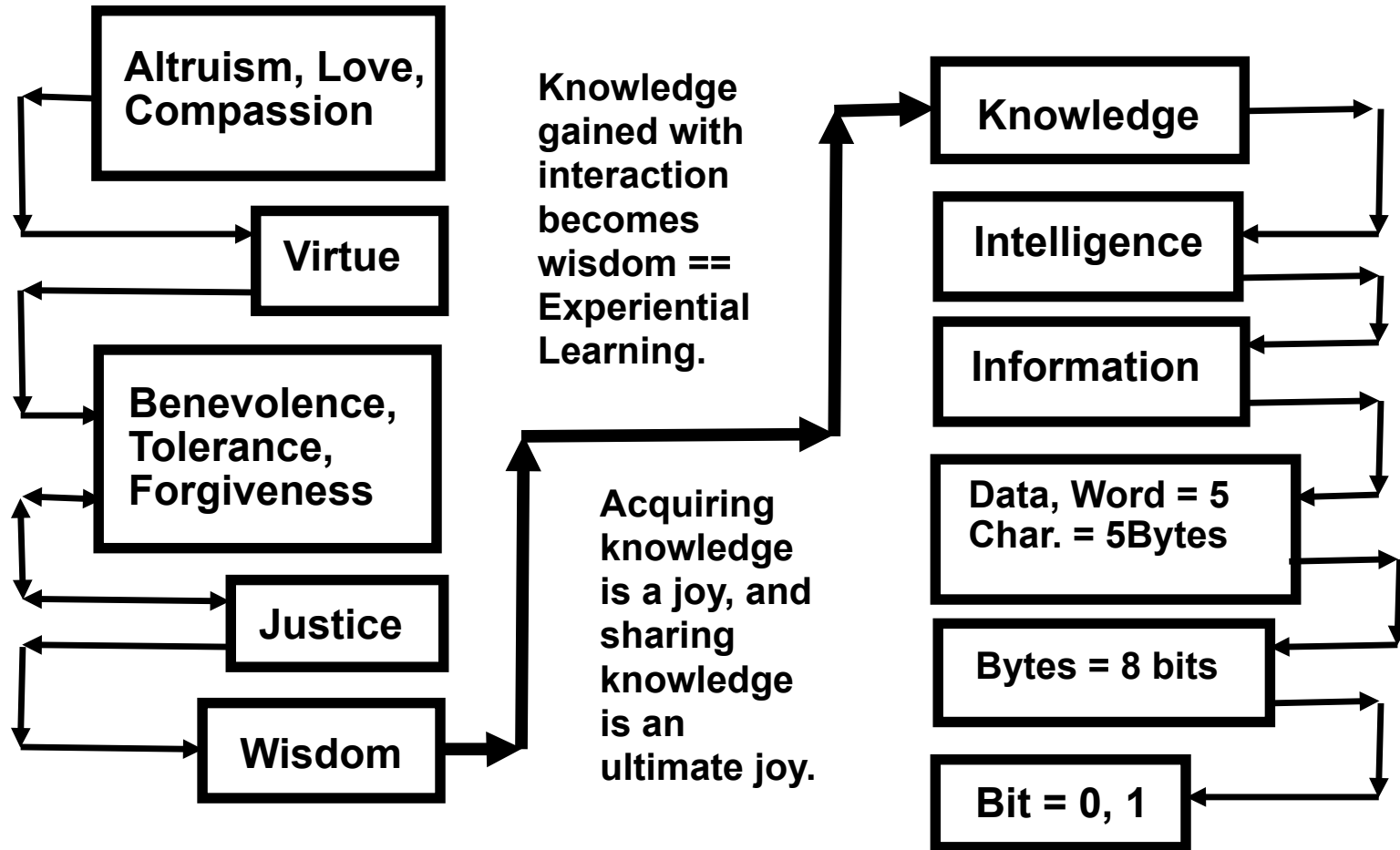
Rainbow Bridge Across the Pacific
太平洋に架ける虹の橋

Mathematical Expression
of
Religions and Cultures

Judeo-Christianity

$$\frac{1}{0} = \infty$$

Islam
(Arabic numeral)

Buddhism
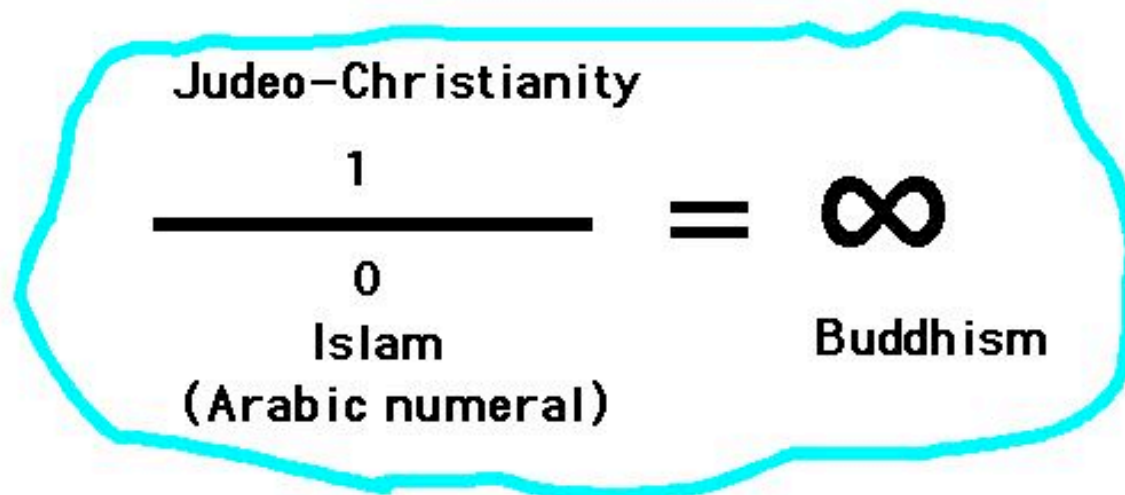
Peaceful coexistence of those three religions can bring **Infinite Possibilities**

June 24, 1998

GLOSAS / USA

Slide #9

6

Hierarchy of Information and Ethics

Altruism, Love, Compassion

Virtue

Benevolence, Tolerance, Forgiveness

Justice

Wisdom

Knowledge gained with interaction becomes wisdom == Experiential Learning.

Acquiring knowledge is a joy, and sharing knowledge is an ultimate joy.

Knowledge

Intelligence

Information

Data, Word = 5 Char. = 5Bytes

Bytes = 8 bits

Bit = 0, 1

Knowledge and Wisdom

- **"Knowledge is power."**

  Francis Bacon

- **"Knowledge cuts up the world; Wisdom makes it whole."**

  David Maybury-Lewis

  The New York Times Book Review (Date Unkown)

- **Analysis and Synthesis**

Hierarchy
of
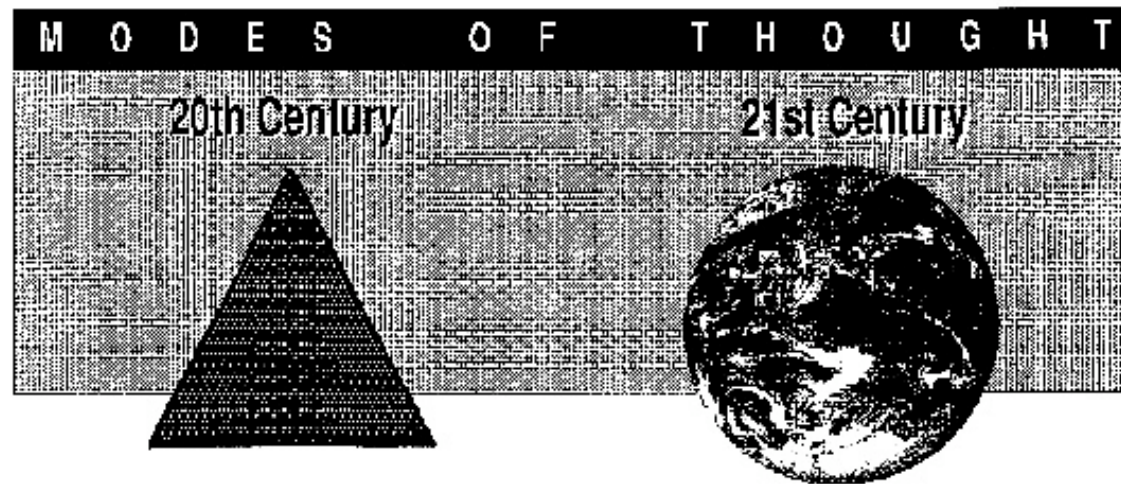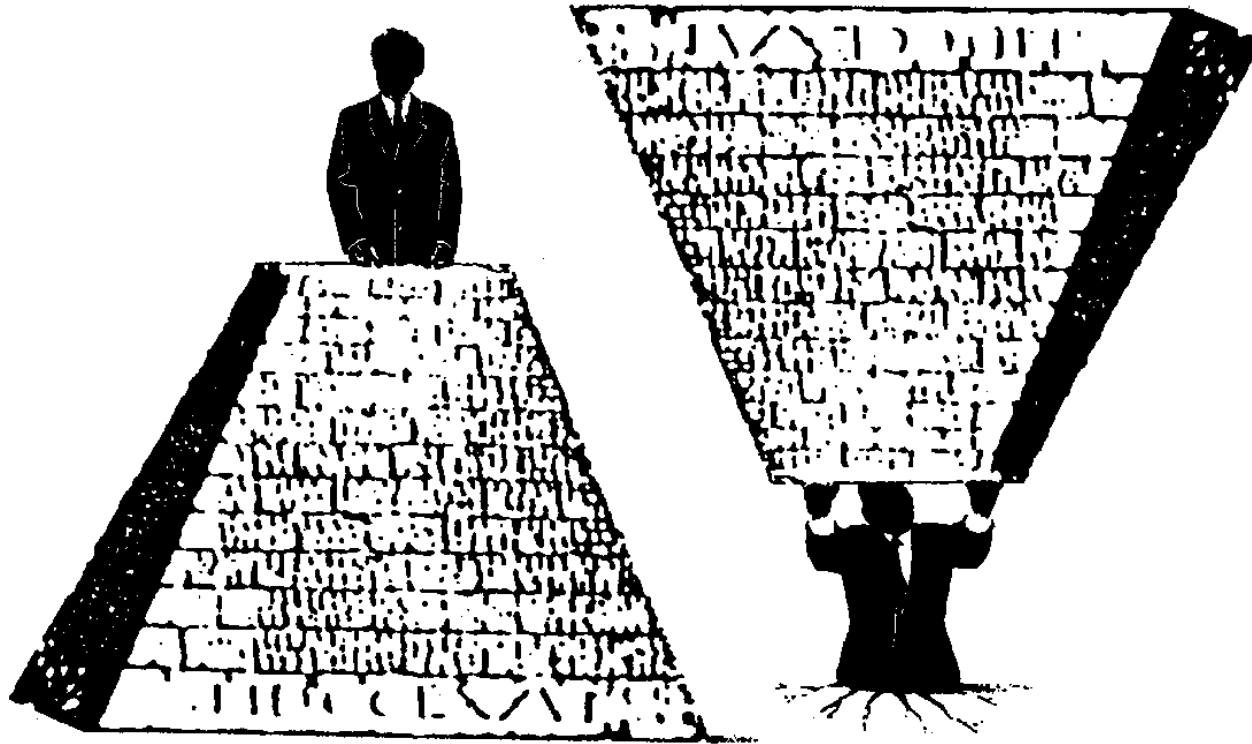# Civilization, Culture and Religion

Civilization

Culture

Religion
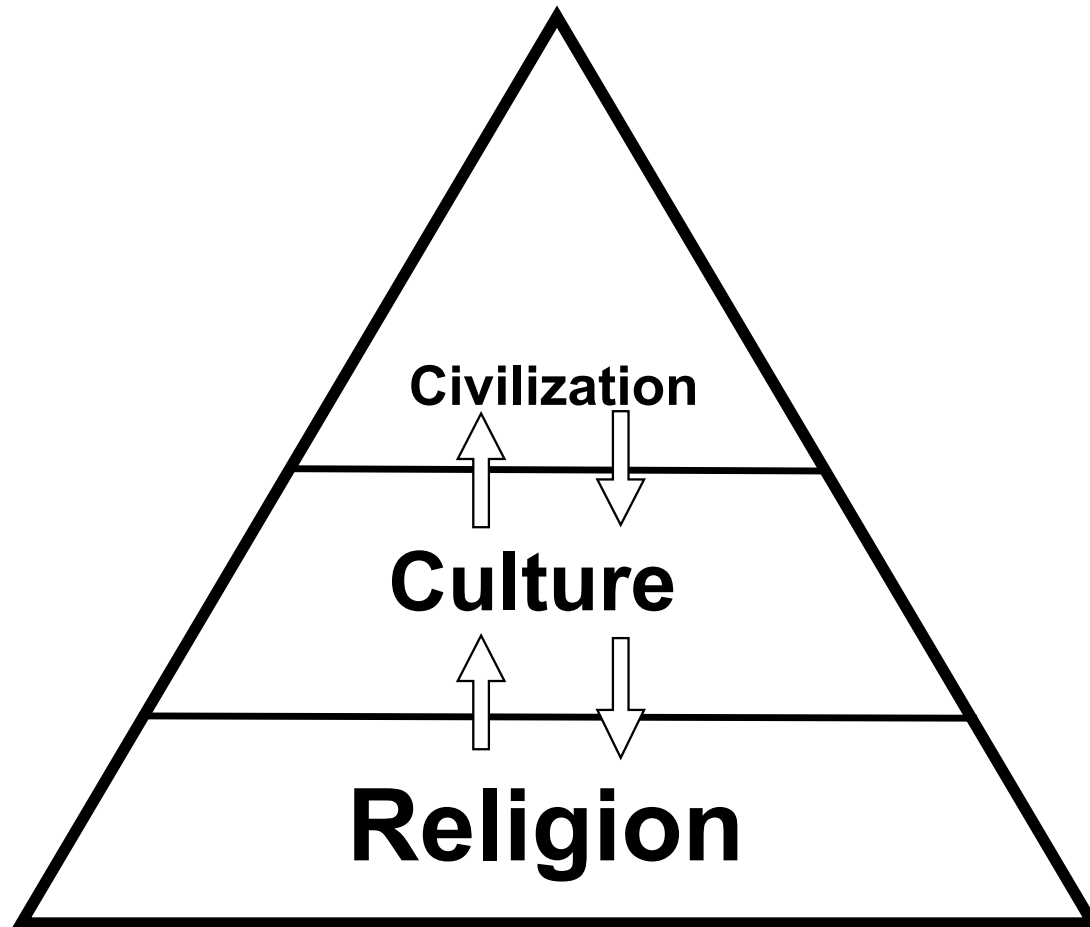
Crumbling Feudalistic Hierarchy

The New York Times
February 20, 1994

Lawrence Carroll
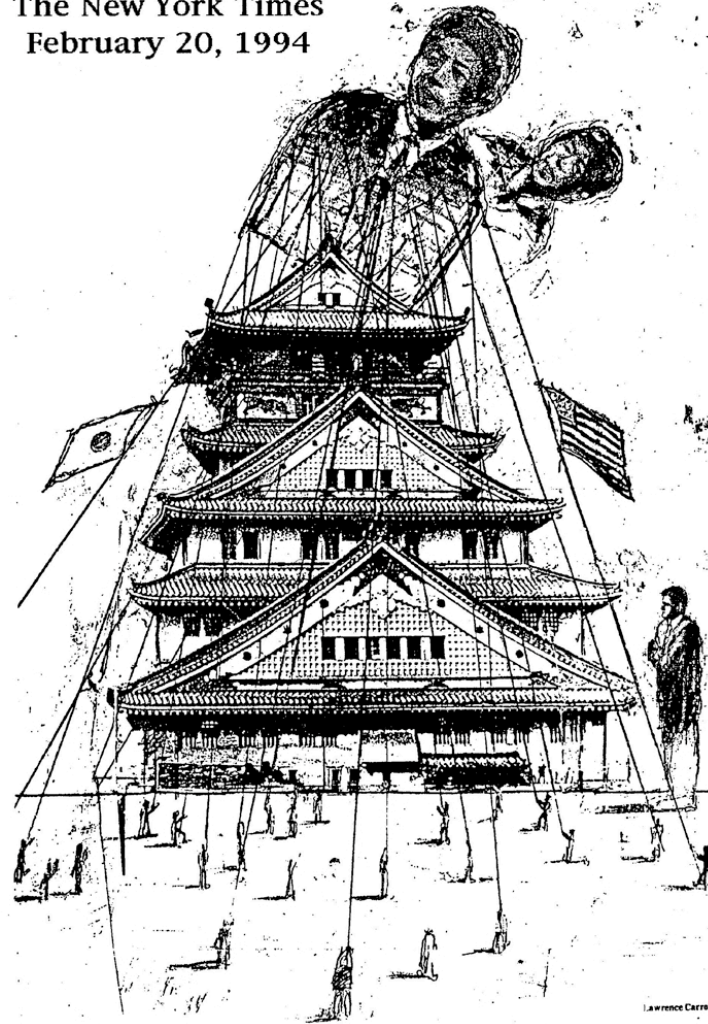
Mind Change
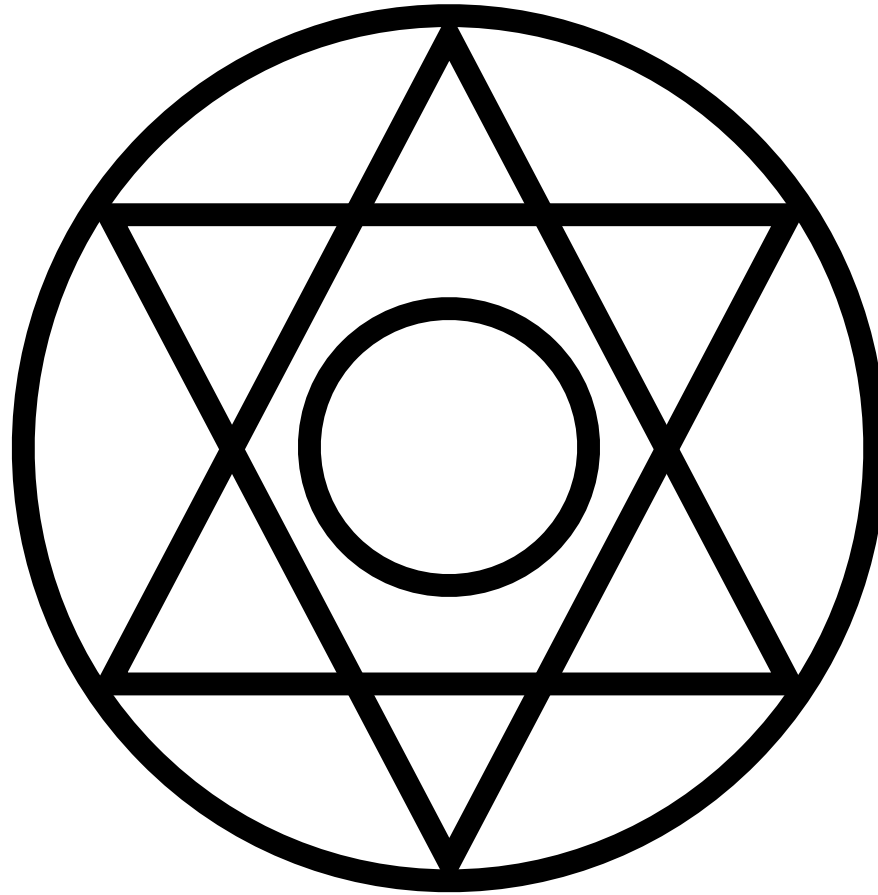## 20th Century to 21st Century

Private vs Public Service

"Why Business Fail in Government," The New York Times, 1987

Logo of GLOSAS/USA

Culture of America
(Unique crucible for innovation)

- Freedom of thought

- Independent thinking

- Immigration of new minds

- Risk-taking

- Non-corrupt bureaucracy

- Financial market and venture capital

These institutions, which nurture innovation, are the
real crown jewels of American culture.

Friedman, T. L., "The Secret of Our Sauce," The New York Times, March 7, 2004

How to Fire Up The Innovation Machine

BusinessWeek, October 11, 2004, Page 240

At a time of intense division, with deep political and religious fault lines splitting the world, innovation stands out as a powerful integrative force.

It ties countries, companies, and consumers together in creating value, solving problems, and generating wealth.

An innovation economy demands that society be open, dynamic, educated, international, and risk-taking. Given a chance, innovation can improve all our lives.

Financial risk-taking is the fuel that powers the process of change.

Worldwide innovation networks are the new keys to R&D vitality -- and competitiveness.

What is peace through culture?

The word "culture" is deriven from the two words "cult" and "ur." "Cult," of course, means cultivation. "Ur" is an ancient Chaldean term meaning "light" -- the creative aspect of the universe. Hence, culture is literally the cultivation of creativity.

Peace is more than just the absence of war. Just as it takes acts of war to make war, it takes acts of peace to make peace. Peace, then, is a structure of positive acts of creativeness that are carried out in a spirit of high idealism.

"Genuine peace must be the product of many nations, the sum of many acts. It must be dynamic, not static, changing to meet the challenge of each new generation. For peace is a process -- a way of solving problems."

John F. Kennedy

On Peace

Peace is a never-ending process, the work of many decisions by many people in many countries.

It is an attitude, a way of life, a way of solving problems and resolving conflicts... It requires us to work and live together.

Oscar Arias Sanchez; Nobel acceptance speech, 1987

Global Leader

"The great leaders of tomorrow will be the ones who understand how to get everyone to participate."

FORTUNE, January 25, 1993, Page 69

Principle of Global E-Learning

- **Collaborative Learning**

- **Experiential Learning**

- **Objective Learning**

- **Autonomous Learning**

Chinese Proverb

When I hear, I forget.

When I see, I remember.

When I do, I know.

Knowledge applies with interaction
becomes wisdom.

GLOSAS Projects
(GLObal Systems Analysis and Simulation Association in the U.S.A.)

Takeshi Utsumi, Ph.D., P.E.

- Chairman, GLOSAS/USA

- Laureate of Lord Perry Award for Excellence in Distance Education

- Founder and V.P. for Technology and Coordination of Global University System (GUS)

- http://www.friends-partners.org/GLOSAS/

Click "Current Reference Websites" in the home page listed above.

Muito Obrigado

Arigato

("Thank you" in Japanese)

(not alligator)