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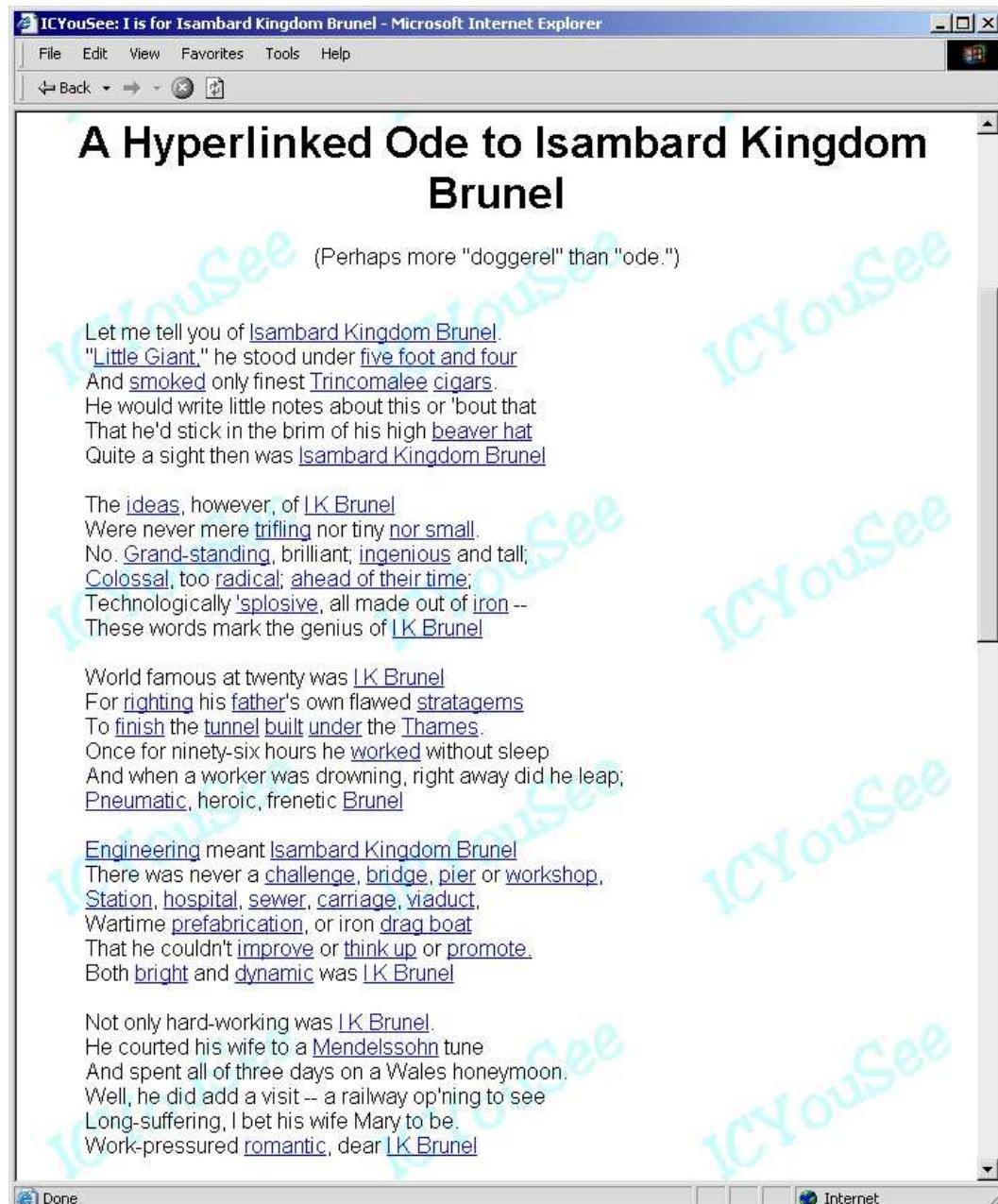
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Appendix A

Evidence of Associative Writing in the Web

This section presents a selection of the integrated writing evidence uncovered by the investigations reported in Chapter 3.



<http://web.archive.org/web/20000711092043/http://www.ithaca.edu:80/Library/Training/hoti.html>

FIGURE A.1: A Hyperlinked Ode to Isambard Kingdom Brunel, crawled 07/2000.

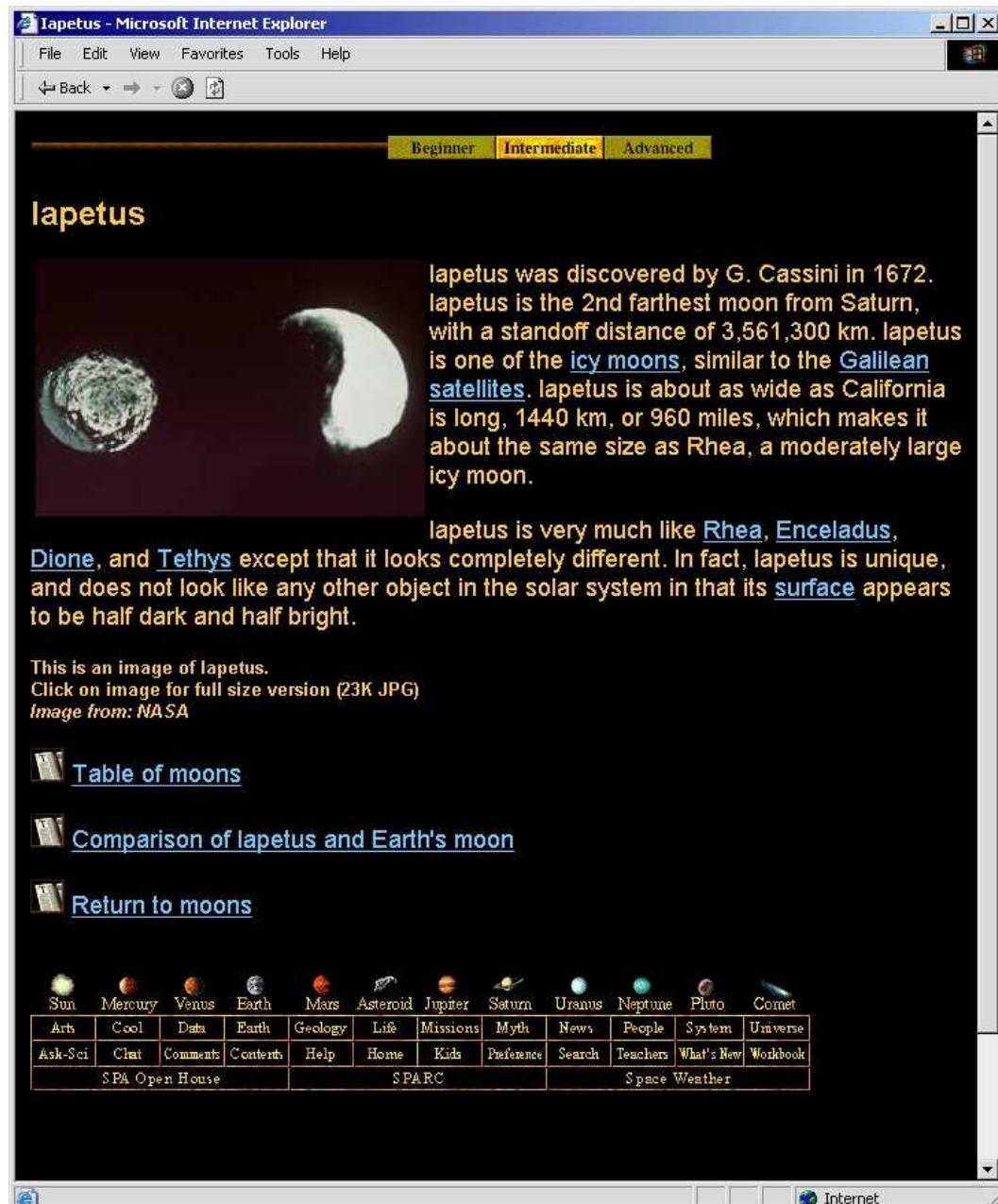


FIGURE A.2: Windows to the Universe: the moon Iapetus, crawled 05/1997.

The screenshot shows a Microsoft Internet Explorer window with the title bar 'Suihkuseurapiiri - Microsoft Internet Explorer'. The menu bar includes 'File', 'Edit', 'View', 'Favorites', 'Tools', and 'Help'. The toolbar includes 'Back', 'Forward', and 'Stop' buttons. The main content area displays a page with the following text:

Some technical details

Lubrication system

Oil circulation for the jet is achieved by pumping oil through it by an old car oil pump. The pump is installed in a rectangular metal box that acts as an [oil tank](#). It is being driven by a DC motor from an old cleaning machine and powered by a 12V motorcycle battery. One of the switches in the control box turns on the pump and the other starts charging the battery if the vehicle is plugged into an external power unit. The oil pressure can be checked from a [meter](#) behind the vehicle. The rectangular device left from the meter is a pressure switch that automatically shuts down the fuel pump if the oil pressure drops below 1 bar and the cylindrical device right from the meter is the oil filter.

Injection nozzle and fuel pumps

We use ordinary diesel fuel to power the jet. The fuel is injected in the combustion chamber through a nozzle that has been found from the remains of a dismantled Russian jet bomber. The fuel is pumped in the nozzle by [a pump](#) that originally has been in an oil burner for ordinary household central heating system. The fuel injection pressure controls the power output of the jet and it can be varied by changing the speed of the fuel pump. A DC motor drives the fuel pump and its speed can be adjusted by changing its input voltage between 0 and 50 volts by a chopper based [voltage controller](#). The power source for the pump is a package of NiCd batteries that are installed inside the controller box. It can be charged with the same external power unit than the battery for the oil pump. The afterburner has similar DC motor but only with an on/off switch. [The pump](#) is also a bit different but it uses the same battery pack as the main fuel pump. These DC motors are not from an old cleaning machine but from a disassembled computer printer. There are two potentiometers in the voltage controller unit. One of them is used to adjust the jet to a minimum power that keeps it running. [The other](#) is installed near the driver's hand so that he can turn the jet to full power by just a move of his finger.

Ignition

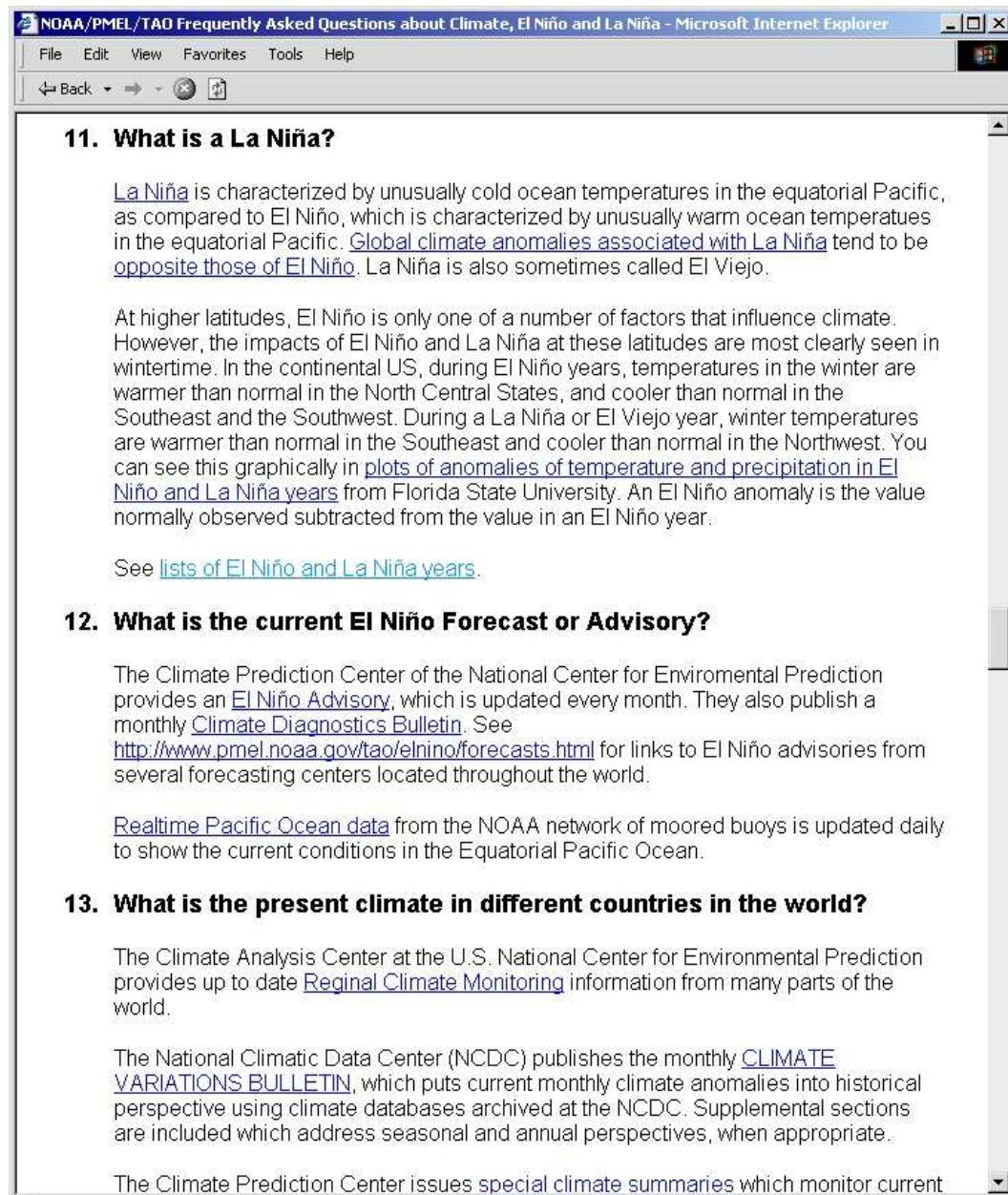
The third battery in the system drives [the igniter unit](#). It has an ordinary car ignition transformer driven by a semiconductor switch and an oscillator. The device generates high voltage pulses that produce sparks in a car spark plug that is been inserted in the combustion chamber. After the jet starts the igniter unit may be switched off.

The old bicycle turned out to be far too weak to withstand the weight of the jet, driver and auxiliary systems so we had to weld some metal pipes to keep it together. The weight of the jet makes the vehicle quite unstable so we also added two wheels to prevent it from falling if something goes wrong.

At the bottom of the browser window, the status bar shows 'Done' and 'Internet'.

<http://web.archive.org/web/19990422024442/http://lenkkari.cs.tut.fi:80/%7Esk73171/turbo.html>

FIGURE A.3: The Eunuch 1: a turbojet driven vehicle developed at Tampere University of Technology, Finland, crawled 04/1999.



The screenshot shows a Microsoft Internet Explorer window with the title bar "NOAA/PMEL/TAO Frequently Asked Questions about Climate, El Niño and La Niña - Microsoft Internet Explorer". The menu bar includes File, Edit, View, Favorites, Tools, and Help. The toolbar includes Back, Forward, Stop, and Refresh buttons. The main content area displays a list of frequently asked questions:

- 11. What is a La Niña?**

La Niña is characterized by unusually cold ocean temperatures in the equatorial Pacific, as compared to El Niño, which is characterized by unusually warm ocean temperatures in the equatorial Pacific. Global climate anomalies associated with La Niña tend to be opposite those of El Niño. La Niña is also sometimes called El Viejo.

At higher latitudes, El Niño is only one of a number of factors that influence climate. However, the impacts of El Niño and La Niña at these latitudes are most clearly seen in wintertime. In the continental US, during El Niño years, temperatures in the winter are warmer than normal in the North Central States, and cooler than normal in the Southeast and the Southwest. During a La Niña or El Viejo year, winter temperatures are warmer than normal in the Southeast and cooler than normal in the Northwest. You can see this graphically in plots of anomalies of temperature and precipitation in El Niño and La Niña years from Florida State University. An El Niño anomaly is the value normally observed subtracted from the value in an El Niño year.

See [lists of El Niño and La Niña years](#).
- 12. What is the current El Niño Forecast or Advisory?**

The Climate Prediction Center of the National Center for Environmental Prediction provides an El Niño Advisory, which is updated every month. They also publish a monthly Climate Diagnostics Bulletin. See <http://www.pmel.noaa.gov/tao/el-nino/forecasts.html> for links to El Niño advisories from several forecasting centers located throughout the world.

Realtime Pacific Ocean data from the NOAA network of moored buoys is updated daily to show the current conditions in the Equatorial Pacific Ocean.
- 13. What is the present climate in different countries in the world?**

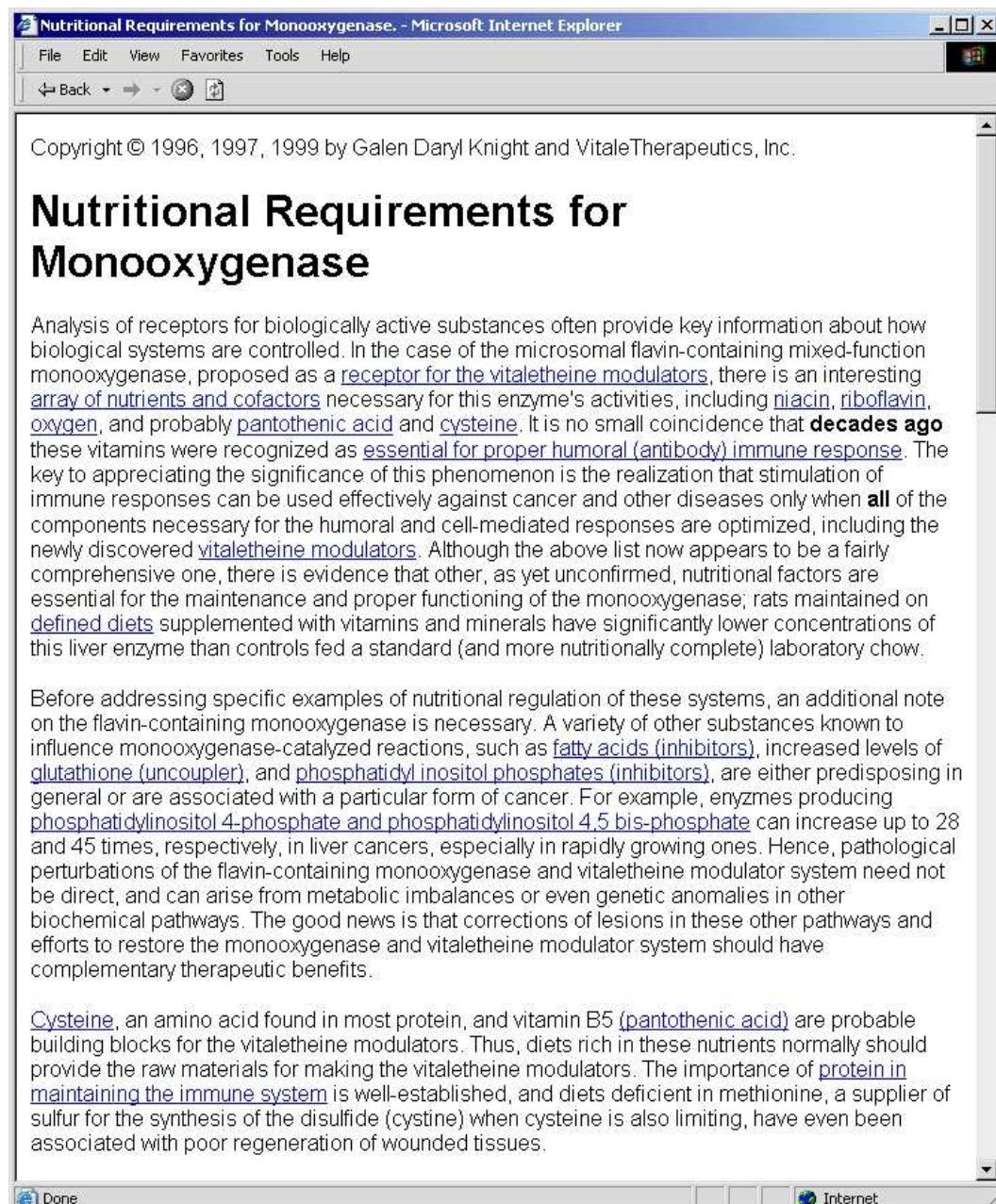
The Climate Analysis Center at the U.S. National Center for Environmental Prediction provides up to date Regional Climate Monitoring information from many parts of the world.

The National Climatic Data Center (NCDC) publishes the monthly CLIMATE VARIATIONS BULLETIN, which puts current monthly climate anomalies into historical perspective using climate databases archived at the NCDC. Supplemental sections are included which address seasonal and annual perspectives, when appropriate.

The Climate Prediction Center issues special climate summaries which monitor current

Address bar: <http://web.archive.org/web/19990501014326/http://www.pmel.noaa.gov:80/toga-tao/el-nino/faq.html>

FIGURE A.4: Frequently asked questions about El Niño and La Niña, crawled 05/1999.



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Nutritional Requirements for Monooxygenase

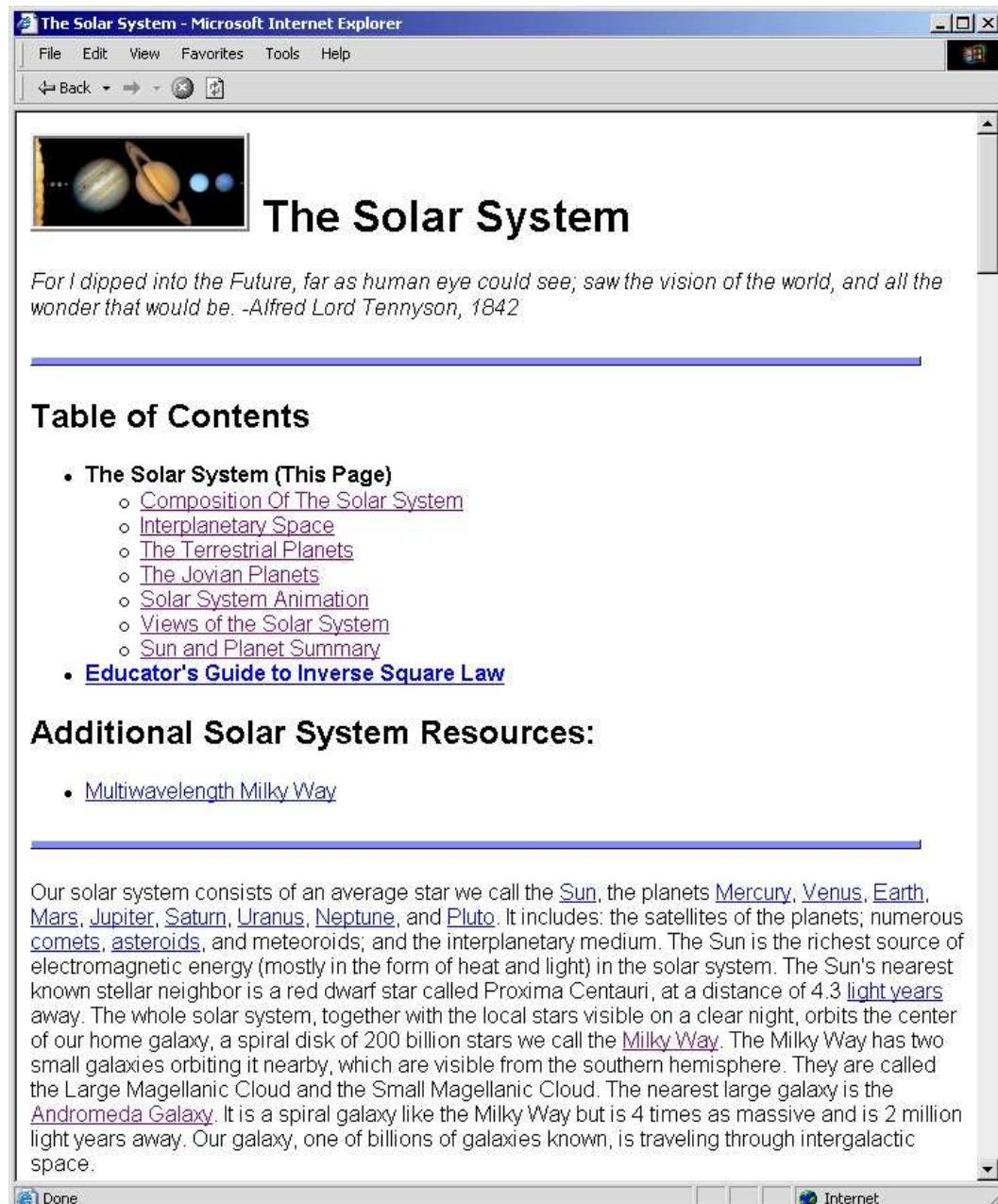
Analysis of receptors for biologically active substances often provide key information about how biological systems are controlled. In the case of the microsomal flavin-containing mixed-function monooxygenase, proposed as a receptor for the vitalettheine modulators, there is an interesting array of nutrients and cofactors necessary for this enzyme's activities, including niacin, riboflavin, oxygen, and probably pantothenic acid and cysteine. It is no small coincidence that **decades ago** these vitamins were recognized as essential for proper humoral (antibody) immune response. The key to appreciating the significance of this phenomenon is the realization that stimulation of immune responses can be used effectively against cancer and other diseases only when **all** of the components necessary for the humoral and cell-mediated responses are optimized, including the newly discovered vitalettheine modulators. Although the above list now appears to be a fairly comprehensive one, there is evidence that other, as yet unconfirmed, nutritional factors are essential for the maintenance and proper functioning of the monooxygenase; rats maintained on defined diets supplemented with vitamins and minerals have significantly lower concentrations of this liver enzyme than controls fed a standard (and more nutritionally complete) laboratory chow.

Before addressing specific examples of nutritional regulation of these systems, an additional note on the flavin-containing monooxygenase is necessary. A variety of other substances known to influence monooxygenase-catalyzed reactions, such as fatty acids (inhibitors), increased levels of glutathione (uncoupler), and phosphatidyl inositol phosphates (inhibitors), are either predisposing in general or are associated with a particular form of cancer. For example, enzymes producing phosphatidyl inositol 4-phosphate and phosphatidyl inositol 4,5 bis-phosphate can increase up to 28 and 45 times, respectively, in liver cancers, especially in rapidly growing ones. Hence, pathological perturbations of the flavin-containing monooxygenase and vitalettheine modulator system need not be direct, and can arise from metabolic imbalances or even genetic anomalies in other biochemical pathways. The good news is that corrections of lesions in these other pathways and efforts to restore the monooxygenase and vitalettheine modulator system should have complementary therapeutic benefits.

Cysteine, an amino acid found in most protein, and vitamin B5 (pantothenic acid) are probable building blocks for the vitalettheine modulators. Thus, diets rich in these nutrients normally should provide the raw materials for making the vitalettheine modulators. The importance of protein in maintaining the immune system is well-established, and diets deficient in methionine, a supplier of sulfur for the synthesis of the disulfide (cystine) when cysteine is also limiting, have even been associated with poor regeneration of wounded tissues.

<http://web.archive.org/web/19990422024405/http://www.vitaletherapeutics.org:80/%7Egalenvtp/vtlmonox.htm>

FIGURE A.5: Nutritional Requirements for Monooxygenase, crawled 04/1999.



The Solar System - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop

 The Solar System

For I dipped into the Future, far as human eye could see; saw the vision of the world, and all the wonder that would be. -Alfred Lord Tennyson, 1842

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 - [Views of the Solar System](#)
 - [Sun and Planet Summary](#)
- [Educator's Guide to Inverse Square Law](#)

Additional Solar System Resources:

- [Multiwavelength Milky Way](#)

Our solar system consists of an average star we call the [Sun](#), the planets [Mercury](#), [Venus](#), [Earth](#), [Mars](#), [Jupiter](#), [Saturn](#), [Uranus](#), [Neptune](#), and [Pluto](#). It includes: the satellites of the planets; numerous comets, [asteroids](#), and meteoroids; and the interplanetary medium. The Sun is the richest source of electromagnetic energy (mostly in the form of heat and light) in the solar system. The Sun's nearest known stellar neighbor is a red dwarf star called Proxima Centauri, at a distance of 4.3 [light years](#) away. The whole solar system, together with the local stars visible on a clear night, orbits the center of our home galaxy, a spiral disk of 200 billion stars we call the [Milky Way](#). The Milky Way has two small galaxies orbiting it nearby, which are visible from the southern hemisphere. They are called the Large Magellanic Cloud and the Small Magellanic Cloud. The nearest large galaxy is the [Andromeda Galaxy](#). It is a spiral galaxy like the Milky Way but is 4 times as massive and is 2 million light years away. Our galaxy, one of billions of galaxies known, is traveling through intergalactic space.

Done Internet

<http://web.archive.org/web/19990218162317/http://www.if.ufrgs.br:80/ast/solar/solarsys.htm>

FIGURE A.6: The Solar System, crawled 02/1999.

University of Michigan profile - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Home

UNIVERSITY OF MICHIGAN SYSTEM PROFILE



The University of Michigan, a leader in undergraduate and graduate education and one of the world's premiere research universities, offers rigorous academic programs, outstanding faculty, and diverse cultural and social opportunities in a stimulating intellectual environment.



The center portion of the President's House, residence of U-M presidents, greeted the University's first Ann Arbor class in 1841 and is the oldest building on campus.

Founded in 1817, the U-M has been the national model for the large public university for more than a century. Today, the 53,000 students on the three U-M campuses (Ann Arbor, Dearborn and Flint) come from every state and 130 countries. The Ann Arbor campus, with 38,000 students, offers 6,100 undergraduate and graduate courses each term. Students can choose from more than 225 undergraduate majors and 600 degree programs offered by its 19 schools and colleges. Classes range in size from fewer than 10 to several hundred, and the student/faculty ratio for undergraduate and graduate

students is 10:1. Eighty-two percent of undergraduate students graduate within six years—the highest graduation rate in the state of Michigan. Six to nine years after graduation, 65 percent are either in graduate school or have earned an advanced degree. They join more than 420,000 living alumni, more than 160,000 of whom live in Michigan—the largest alumni body of any college or university.

Among the strengths of the Ann Arbor campus are its more than 900 student clubs and organizations; 25 varsity sports; a dozen museums and galleries; several nature areas, including the 123-acre Nichols Arboretum; 24 libraries containing more than 7.3 million volumes and the largest collection of papyri in the Western Hemisphere—available online to scholars and the public.



The acoustically acclaimed Hill Auditorium and numerous

Done Internet

<http://web.archive.org/web/200012082104/http://www.umich.edu:80/~newsinfo/Profile/umprofil.html>

FIGURE A.7: University of Michigan System Profile, crawled 12/2000.