THE WIN ONE

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EDITED BY

GRAHAM POWELL

"To the tranquil mind, flowers are great friends, radiating beauty without recourse to words."

Introduction by the editor, Graham Powell.

Welcome to the tenth magazine which features work by the members of the World Intelligence Network. The WIN continues to grow in terms of the number of societies akin to it and the diversity of opportunities available to people who log on to www.iqsociety.org .

This **W**orld **I**ntelligence **N**etwork **ON**-line **E**dition reflects many of the thoughts and beliefs wrought through the tough times that modern society has forged. It also recounts in many forms the joy and excitement that the relative ease of travel has brought in the 21st century. I was particularly pleased to meet several members during my own travels, so much so, I am amazed how 'chipper' I was while chatting with members at the Ritz-Carlton, Dubai, a few weeks ago, especially having just flown in, and having well over 32 hours of sleepless travel behind me. The discussions we had about the WIN were also useful, of course, and the results of these will influence the development of our meta-society over the next few years.

As editor of this magazine, I am also blessed because I can learn many new things while compiling it, not only from my own acts as editor, but (and perhaps mainly) from the articles and pieces of artwork that are submitted. I have been particularly inspired by the diverse contributions for this 'Fibonacci Edition', my own work having already spilt over towards the next magazine, which will come out in a few months' time. (Please prepare yourselves for an analysis of a book by Steven Pinker, one of my favourite academics!)

I am also happy to read about WIN members taking on new roles in life, and finding time to express their joys and sorrows in order to enrich the lives of others. This has, at times, evolved into serious debate, and one of those debates is amply stoked in this edition, that is, the one about the history and role of intelligence tests in society. There is also feedback from previous editions of this magazine, and I will be delighted to receive more in the near future. Please e-mail me on gp_ukit @ yahoo.com, the spaces before and after the @ symbol requiring you to close them. I have done this for all the e-mail addresses supplied in this work.

Now then, please read the contents page and make your choice. Dive into what attracts you, or go through the magazine in order. I especially hope you will try the puzzles I've created, and marvel at some of the complex test and cryptic coding work that has been included. Above all, enjoy the experience you are about to have!

Contents.

What is Biofeedback?

Biofeedback is a method of helping people to develop greater awareness of their physiological functioning using equipment that provides information (feedback) on biological processes of which the individual is not usually aware, such as heartbeat, skin temperature, or muscle tension.

Three main goals of biofeedback can be identified:

(1) To improve the client's awareness of their physiological, cognitive and emotional functioning in order to facilitate helpful changes;

(2) To create those changes and to be able to self-regulate; and

(3) To be able to transfer the training learned in the therapist's office to the client's day-to-day environment, enabling long-lasting improvement to occur.

Biofeedback can be used for a variety of purposes, including, but not limited to, the alleviation or reduction of anxiety and stress, muscle tension, high blood pressure, asthma and other breathing difficulties, irritable bowel syndrome and other disorders of the digestive system, temporomandibular joint disorder, back problems, chronic pain, headaches and migraine, insomnia, major depressive disorder, heart disease, diabetes, chronic fatigue syndrome and fibromyalgia.

It can be used by medical doctors, chiropractors, mental health practitioners, dentists and other healthcare providers in conjunction with existing standard health treatment plans, or by specialist biofeedback providers to assist clients with various conditions.

Mindfulness is an important component in developing the self-awareness necessary for biofeedback to work successfully, and in that regard it works especially well when combined with meditation or any of the so-called "third wave" mindfulness-based psychotherapies.

There are various types (or "modalities") of biofeedback, and which ones are used might depend on the client's symptoms, which methods "click" with the client, which ones they find easiest to use - and/or seem to be achieving the best results - and to some extent, which ones conform to the therapist's preferences.

As the field of biofeedback is still relatively new, some modalities have been studied more extensively than others in respect to certain types of health condition. Some

types of biofeedback are still at the anecdotal or case study level of evidence for a given condition, or have only a single study or limited statistical data available. Research is ongoing.

The equipment that is used will typically consist of monitoring pickups that attach to the client's skin, and these have wires feeding into the biofeedback machine. The stream of data from the machine is interpreted by computer software that displays visual read-outs showing what is happening in the client's body.

One of the first things that the therapist should do is to take a full inventory of the client's overall state of health and symptoms, plus the client's medical history, lifestyle, nutrition, sleep patterns etc. and clarify what the client hopes to achieve through a course of biofeedback. Various baseline checks should then be carried out to establish a starting point for the training, particularly while the client is sitting or standing at rest, and while being subjected to various types of stressors (sitting and typing at a keyboard, for example, for a client reporting muscle tension and back pain at work), and to establish the client's rate of recovery from the stressor during rest periods.

Here are a few of the common types of biofeedback:

Electromyography (EMG)

Electromyography, or EMG, is used for monitoring muscle tension by picking up muscle action potentials (usually less than 3 microvolts for most muscles), often using one or two but occasionally more channels of data, and reporting this information either as a graph on a screen or as an audio tone. The therapist can then train the client to use this information to address muscle dysfunction in the afflicted area(s).

EMG is often referred to as surface electromyography, or sEMG. The sensors are simply stuck to the surface of the skin. As with all types of biofeedback, the procedure is entirely non-invasive, and the equipment sensors purely pick up skin surface data signals.

EMG was reported as early as 1970 by Drs. Thomas Budzynski, Johann Stoyva and Charles Adler as having been used successfully to treat tension headaches. With further developments in EMG practice and increasing acceptance by the scientific

community, EMG was subsequently demonstrated as being effective for various muscle impairments.

Nowadays EMG is often used in conjunction with other therapies and practices such as CBT and other types of counselling, relaxation exercises and meditation for muscle rehabilitation for stroke patients, fibromyalgia, headaches, anxiety and repetitive strain injury, as well as for peak performance training for sportspeople and musicians.

Temperature (thermal) biofeedback

Thermal biofeedback is done by sticking electrodes on the client's fingers and watching a temperature graph on a computer screen. Many people, having been taught at school that the temperature of the human body is 98.4°F (36°C), are surprised to see their finger temperature shown as 88°F (31°C) or less. That is because the former temperature measurement refers to core temperature. The normal temperature for the body's extremities, such as the fingers, tends to be lower.

In the late 1960s Elmer Green and colleagues at the Menninger Foundation began performing thermal biofeedback and these techniques were partially based upon autogenic training techniques, which uses similar training techniques to induce relaxation.

Thermal biofeedback training has been used for general relaxation, headaches, and the narrowing (constriction) of blood vessels, the lessening of pain for arthritis sufferers, hypertension (high blood pressure) and Raynaud's disease.

Galvanic skin response training

Galvanic skin response training, also known as electrodermal biofeedback or skin conductance biofeedback, measures the electrical conductivity of the skin, usually in microsiemens. Some types of GSR equipment measure skin resistance rather than skin conductance.

This modality uses similar finger electrodes to the thermal biofeedback training and the signals are fed into a computer which displays the level of skin conductance usually as a graph on screen. Often games are available for training the desirable response; for example, one such game resembles Pac-Man where the character moves faster along the maze as the client learns to relax.

With experience of this type of training clients become more aware of the internal sensations that accompany changes in skin conductance. When the level of sympathetic arousal is lowered, there is a decrease in skin conductance (i.e. the resistance is higher). This is a useful tool for teaching relaxation and stress management, and can also be used in conjunction with other therapies to allow the therapist to monitor the client's emotional reactivity.

I discuss some of the psychotherapy-oriented uses and technical considerations at http://www.sevensigma.info/articles/1gsr.html

Heart rate variability (HRV) training

Contrary to popular belief, a person's heart rate does not beat like a perfect metronome. In a normal individual at rest, there is a surprising amount of beat to beat and moment to moment variation. In periods of extreme stress or heavy physical activity, the heartbeat becomes not only faster but more rhythmically regular. In people who are in poor physical condition, the range of cardiovascular adaptability can be compromised and an unexpected stressful situation can put them at risk of cardiac incidents or death.

HRV training enables the person to train their heart rate oscillations back to a more healthy state. These oscillations reflect the interplay between the sympathetic and parasympathetic branches of the autonomic nervous system. The sympathetic nervous system can be thought of as the accelerator, which causes the heartbeat to increase. The parasympathetic nervous system can be thought of as the brake. This pattern is known as respiratory sinus arrhythmia. Medicine has long known that the heart rate increases with each inhalation and decreases with each exhalation. HRV training therefore uses paced breathing in order to achieve greater heart rate variability.

Before starting a client on HRV training, the therapist should always check to see if the client has had any known breathing problems. A person who habitually over-breathes or hyperventilates would find this training difficult or impossible to do, and with such people it may be necessary to train them out of poor breathing patterns.

To perform HRV training, the person's heartbeat pattern is measured usually by means of a sensor clip attached to one earlobe. To establish a baseline for the training, it is necessary to find the person's resonance frequency (RF) breathing rate – the breathing rate that will stimulate the maximum heart rate oscillations.

Many ancient practices such as yoga or meditation focus on breathing to achieve states of relaxation. Perhaps one reason why it may take some people years to learn to achieve deep relaxation, calmness or focus using these types of practices is because it may take considerable trial and error to find which breathing techniques work the best for them. With biofeedback, we have a technologically assisted way of finding out. People who object to this as somehow "cheating" or depriving the would-be meditation student of an entire learning process, may well be missing the point – I am reminded of the old saying that it is not merely practice that makes perfect, it is perfect practice that makes something perfect. With sufficient practice, a person may eventually be able to simply feel the right pace in the body. However, HRV training provides the means to achieve optimum technique and start doing productive practice right from the beginning.

Most people have a RF breathing rate between 4 and 7 breaths per minute. Using the biofeedback software's inbuilt pacer, the therapist will get the client to start at 7 breaths per minute for a couple of minutes or so, then down to 6.5, then 6, and so on, all the way down to 4 breaths per minute. The software would use this to calculate which breathing pace produced the maximum oscillations of heart rate variability. This establishes the person's resonance frequency.

"Homework" can then be assigned for the client to go away and practise for 10-20 minutes a day, using music of the correct tempo, a pacer provided by the therapist, or by using one of the available free or inexpensive smartphone breathing pace apps.

Other types of biofeedback

There are other types of feedback that require more specialist equipment and are beyond the scope of this basic overview. Worth mentioning however is neurofeedback: the use of an EEG to give feedback on brain wave states and activity in various areas of the brain in order to modify particular areas of functioning. This fascinating topic requires its own separate article.

I am setting up a biofeedback and counselling practice for stress relief and personal exploration/development in London. Please address any questions to darkstar @ gwrolph.freeserve.co.uk

August 2013

A book review by Graham Powell.

<u>Mastermind: How to Think Like Sherlock Holmes</u>, by Anna Konnikova.

For Christmas I received a book token from a friend, the early January snap of snowy, sub-zero temperatures further encouraging me to use the said token to purchase an absorbing book.

I was especially pleased when I saw the attractive volume entitled *Mastermind: How to Think Like Sherlock Holmes*, because it occurred while visiting Oxford, England, plus the name struck me because on facebook I'd befriended the author, full name Anna Konnikova Hamilton, only a few weeks before. A few months after I'd purchased her opus, Anna completed her PhD as well, so I was even happier that my money was going to help an academic forge her career.

As I just said, the cover is attractive, the version in England having the title written in different fonts and with a few of the letters written in dark, reflective typescript, the effect being that they seem to disappear under certain light conditions. Mindfulness is one of the main themes of the book, and even the jacket entices us to resolve a problem to recall the title. Examples abound in the book, the philosopher William James being referred to as having lauded mindfulness in education; Ellen Langer is cited for pointing out how mindfulness will improve when observing pictures of nature, and there are plenty of other illustrated examples throughout the book.

The most entertaining aspect to the book, of course, is that the famous character Sherlock Holmes is used to exemplify all the modes of investigation and the methods for increasing awareness which are explored in the text. It is a bonus that Anna Konnikova's writing style is clear, shows a light but far from superficial touch, and is succinct. Many additional references towards the end of the book give the more adventurous reader much more scope for deepening both their knowledge and their understanding of the concepts.

What kind of a person was Sherlock Holmes?

Part detective, part psychologist, the character derives from Oliver Wendell Holmes and Dr. Joseph Bell, the latter being Sir Arthur Conan Doyle's friend and mentor at university. Sir Arthur Conan Doyle's intervention in the George Edalji case during 1907 is also described as an example of how some of the psychological techniques utilized in Conan Doyle's detective stories, were also used in real life.

Furthermore, scientists and scientific method, as often purported by Joseph Bell, are often referred to by Konnikova, a pleasing example being the reference to Richard Feynman, a scientist and teacher famed for not taking his knowledge base for granted. (I recommend the Horizon programmes presented on Youtube for an entertaining adjunct to this point about Feynman.) Basically, Konnikova suggests playing out all the possibilities to the utmost; the ability to be aware of the most obscure details develops slowly over time.

Another interesting aspect that is pointed out is the 'correspondence bias', whereby the recipient of information is predisposed to believe that the information is also believed by the person giving that information. This has been demonstrated by Daniel Gilbert, a psychologist. It reminded me of a lecture on Youtube about happiness. It revealed how people more readily follow what you do, rather than what you say. (The Harvard lecturer touched his chin but asked people to touch their cheek. The majority of the audience touched their chin and did not following the verbal instruction). So, if you demonstrate your happiness, it will be much more likely that others will follow; however, more in line with Konnikova's point, be sceptical. Don't just believe all that you hear, or all that you are shown!

Mindfulness and Motivation.

The motivation to remember something is pointed out as extremely important in gaining mindfulness within our everyday lives. Notably Karl Lashley deduced that our brains do not function with engrams, singular memory paths, but within an associative system whereby one memory leads to another. My English teacher used to refer to it, saying:

"Leave it to George!"

By this she meant, leave the retrieval of the memory to the 'librarian' in the mind who searches through the 'books of memory' without being consciously directed. Konnikova uses a similar image by referring to "Holmes' attic", the huge storage area in his brain which he masterfully manages and utilizes during his investigations. This is compared with the attic used by Watson, who, to be fair, is by no means incompetent, but who often does not have "System Holmes" to help him come to the right solution. More recent work by psychologist Karim Kassam is cited, plus the Scooter Libley effect whereby we remember best when first encoding a memory.

How to best utilize that memory on subsequent occasions is a major part of Konnikova's book, which is well worth reading about.

The World is How We Interpret It.

A useful adjunct to the book is the Implicit Association Test (IAT) created by researchers at Harvard University and available on www.implicit.harvard.edu/. So, if you wish to explore what your implicit biases are, and thereby help with the research, check it out! The Availability Heuristic is another concept Konnikova mentions: basically, the easier something is to recall, the more credible it is deemed to be. Some useful and fun examples are given in this section of the book, encouraging the reader to discover more.

The Default Mode Network.

As a teacher and mentor, I found this section particularly interesting because it links well with the work I do to make lessons more "Brain Friendly". The default mode network of the Posterior Cingulated Cortex, the Adjacent Precuneus and the Medial Frontal Cortex, is the system which 'kicks in' when we 'wander mentally' – i.e., for any instructor, when the student drifts off!! Marcus Raickhle has done work on this aspect of human nature, a feature which is familiar to any reader.

"Attentional Blindness" is another aspect, and what Neisser calls our predisposition towards focusing on one thing to the exclusion of others - as if factors around us 'disappear'. We also tend to notice things which are relevant to our main preoccupation, a personal example being when I was working in an accounts office: how often, during lunchtime, did numbers around the town where I was getting something to eat seem to have continued relevance from the office environment I'd just left behind? Konnikova gives useful advice regarding this factor in life and guides the reader towards utilizing her advice practically, citing, for example, Peter Gollwitzer's 5 Goal-orientated Behaviour traits. Basically, Sherlock Holmes filters information towards a goal rather than uses it to inform an opinion. Some other advice is: be inclusive; be mentally engaged; and be aware of how perception alters our interpretation of events.

The Value of Creativity and Imagination.

Another chapter I found particularly illuminating and relevant to my overriding interests in work and leisure activities, was the discussion on creativity and imagination, which is a further 'step' along the journey towards investigative enlightenment for Holmes. I especially appreciated the idea of 'distancing' from a problem or idea via engagement in an activity unrelated to the one being pondered. Holmes had his pipe to smoke and his violin to play. I have found playing the piano relaxes me; my other truly inspirational activity, during which many thoughts emerge, is gardening. I've often wondered about this sensation during my horticultural endeavours, Konnikova's book giving me neurophysiological insight into the phenomena, which I really appreciated.

The Art of Deduction.

Firstly, as regards terms used in the discipline of Logic, Holmes's notion of 'deduction' is in fact 'induction', or 'abduction'; however, the main point is that being able to deduce the real events is, according to Holmes, about:

"Systemised common sense."

A fascinating revelation in this chapter is Konnikova's recount of how the language used to question witnesses of accidents strongly influences their responses – the Misinformation Effect. The Heisenberg Uncertainty Principle is further exemplified here (i.e., how observing something changes what is being observed) and some very enjoyable examples which explore and demonstrate how a particular focus affects our perception at any one time, made this, perhaps, the most intriguing part of the book. (But, of course, that's just my perception of it!)

Self-Knowledge.

The final few chapters have, as an overall theme, the 'science and art of self-knowledge' and personal examples from the author, plus other famous personalities' contributions to creativity, invention and discovery, make for a satisfying conclusion to the book. I thoroughly recommend this volume as an introduction to the notion of self-development, the more intent reader being inspired to go beyond Konnikova's general 'feel good' and 'populist' style – which, none-the-less, wholly suits the genre of the book – and I wish you good luck during your investigations!

A Brief History of IQ Tests

by

Thomas J Hally

Standardized IQ Tests

The term "IQ" was coined by a German psychologist named William Stern as an acronym for *Intelligenz-Quotient*. IQ was a score derived from one of a number of standardized tests (psychologist-administered) designed to access one's intelligence. In the beginning, researchers questioned whether human intelligence could actually—and accurately—be measured. While interest in the measuring of intelligence dates back millennia, it was not until relatively recently that the first IQ test was born. In 1904, French government officials asked psychologist Alfred Binet to help them decide which students were most likely to experience difficulty in school, since they needed a way to identify and help these youngsters. (Primary school education was mandatory in France). Binet asked a colleague, Theodore Simon, to help him create a test with questions focusing on practical matters such as attention, memory and problem solving, things the children were not taught in school. Some children were able to answer more advanced questions than their age group, and so, based on these observations, the now classical concept of *mental age* came into being. Their test, the *Binet - Simon Scale,* was the first standardized IQ test.

By 1916, Stanford University psychologist Lewis Terman had taken the Binet - Simon scale and adapted it for the American public. The Binet–Simon Scale (adapted) was named the *Stanford-Binet Intelligence Scale* and became the standard intelligence test—for several decades—in the United States. The Stanford-Binet, as it is called, used (and uses) a single number known as IQ ("intelligence quotient") to represent an individual's score on the test.

One's IQ was originally determined by dividing the test taker's mental age by his chronological age and multiplying the resulting quotient by 100. Needless to say, this works only for—or best for—children. For example, a child with a mental age of 13.2 years and a chronological age of 10 would have an IQ of 132—and be eligible for Mensa! (13.2 ÷ 10 x 100 = 132). During World War I, several tests were developed by the United States Army with an eye to screening recruits and determining eligibility for certain military jobs. The Army Alpha was a written test

and the Army Beta was administered only in cases where the recruits were illiterate. These and other IQ tests were eventually used for a less than admirable purpose, screening new immigrants as they entered the United States from Ellis Island. IQ test results were inappropriately used to make sweeping generalizations and to verify the claim of "surprisingly low intelligence" of Jewish and Southern European immigrants. These test results and outlandish claims led to a then popular proposal by the "racially motivated" psychologist H.H. Goddard—and others (1920)—to enable Congress to enact restrictions in immigration. Despite the fact that the tests administered were in *English only* and the vast majority of the immigrants could *not understand* that language, the United States government deported many thousands of worthy individuals whom they unfortunately labeled as "unfit" or "undesirable." And this took place a full decade or so before the news began to trickle in from Nazi Germany about *Adolph Hitler's* new eugenics! This is, indeed, a sad chapter in the history of the United States of America.

In 1955, the *Wechsler Adult Intelligence Scale* made its debut. The *WAIS*, as it is called, was psychologist Robert Wechsler's first test, and the WISC (*Wechsler Intelligence Scale for Children*) and the *Wechsler Preschool Primary Intelligence Scale of Intelligence* (WPPSI) were developed later. The adult version has since gone through three revisions: WAIS-R (Revised, 1981), the WAIS-III (1997), and, in 2008, the WAIS – IV made its first appearance in the United States. The WAIS-IV is still not available in a number of countries; and it has not been officially translated and sanctioned in Spanish (at least not in Mexico, where I call home).

Rather than scoring the test on a chronological and mental age-related scale and norm, as was the case with the Stanford-Binet, all versions of the WAIS are scored by comparing the test taker's score to those of other test takers in the same age group. The average IQ score (worldwide) is 100 with 2**/**3 of the scores lying in the "normal" range, between 85 and 115. The WAIS norms have become the standard in IQ testing, and they are also used in the Stanford- Binet, with the exception of the WAIS *Standard Deviation* of 15. The Stanford Binet has an SD of 16, and at least one Cattell test "boasts" an SD of 23.8; often reporting very flattering IQ scores that, in reality, are really a bit deceptive.

High Range IQ Tests and the Wealth—and Dearth—of the Brain

For "genius types", high range IQ tests just may be their refuge and haven. For many others, high range IQ tests are fun, challenging, and they provide the test

taker with a wealth of insight. Many high range tests have an average score fixed at about 145 or 150. The "gamut" measured by these tests is usually between IQ 120 and 190. Below 120 there can be no realistic reporting of one's score (with perhaps 0 correct on the test); and above 190 (200 on some tests), IQ scores are very difficult to interpolate and report, but not impossible.

Paul Cooijmans of The Netherlands is considered the founding father of high range IQ tests and he is the creator of most of the original—and now classic—high range IQ tests. He is also the founder and administrator of super high IQ societies, such as the Glia Society, The Giga Society and the Grail Society. Among Cooijmans' most famous and popular tests are *The Test For Genius, The Nemesis Test* and *Qoymans' Multiple Choice Test*. Cooijmans presence, influence and participation are factors to be considered and they are integral to the ethos of high range IQ tests and societies. Other classical (and new) high range IQ test gurus include Ron Hoeflin, Robert Lato, Laurent Dubois, Mislav Predavec, Jonathon Wai, Kenneth Ferrell, Jeff Leonard, Jason Betts and Ivan Ivec. All are experienced and well-qualified.

(Nota Bene: There are no women high range IQ test authors).

With just a tiny bit of knowledge at my (then) immediate disposal, I asked Ivan Ivec, a 36-year old Croatian and Mensan, and Jason Betts, an Australian from the island of Tasmania and also a Mensa Member, for adequate descriptions of - and the purpose and value of - high range IQ testing. Both of these men are IQ test authors ("creators") in the high range—and both have very high IQs. I immediately found out that, aside from their inherent difficulty, high range IQ tests have yet another very noteworthy quality— they have no time limit! And, after you have finished, you (usually) have the option to send your answer sheet ("better" sent with brief explanations for each answer…) to the test administrator (usually the author) either by email or by postal mail.

According to Betts "There are different types of intelligence that manifest differently at different levels. We know people have different skills and levels of different types of intelligence—such as verbal, patterned, spacial, conceptual, mathematical—but there are different *WAYS* of *g* to manifest [sic], i.e., logical, lateral, convergent, linear, divergent [and] even (*gasp!*) inspirational and genius!"

Both high range IQ tests and standardized IQ tests show and report the manifestation of a *g*-factor, or "general intelligence factor"; but *g* is manifest in

different ways. “And that’s why high range tests work. They *really* work,” states Betts.

Both Jason Betts and Ivan Ivec claim that a test taker will achieve a similar score on a high range IQ test as he would on a standardized IQ test, such as the WAIS, the RAPM, the CFIT and the Stanford-Binet. (This claim may be equally debatable, however, given the human condition and the fact that IQ scores may rise or fall substantially, depending upon one’s physical and mental state ((mood)) at test time). Ivec informs us that another benefit of high range tests is that they are relatively inexpensive (10€ or $15 in most cases—and sometimes free!); and there are contests when favorite IQ tests are featured or new IQ tests are debuted. With lucrative prizes on occasion, these contests can be a “big money draw” for many eager participants. Both Ivec and Betts hold contests and feature a test of the month to introduce a new test, advertise a favorite test or to attract participants in order to norm a high range IQ test.

According to Ivec, “The main complaint that mainly [sic] refers to IQ tests is that they generally require a certain knowledge, such as mathematics, and therefore, they are not culturally unbiased. It should be understood that this knowledge [knowledge needed for high range tests] is mainly on [sic] the primary school level, and so, these criticisms are often reckless, if not malicious.”He continues, “However, for a complete insight into their own abilities, people are encouraged to take more tests of different types and, preferably, from different authors.”

Ivec’s special IQ society and his high range IQ tests can be found at www.ultimaiq.net. Jason Betts’ tests (as well as those tests of a score or more other authors) can be found on the World Genius Directory at www.psiq.org. Jason Betts is the author, editor and publisher of the World Genius Directory. I encourage you all to visit *both* sites, do your reading and investigating, and, by all means, download and print a high range IQ test. Then get comfortable—but not too comfortable—in your long-duration leisure chair and try to get a genius’ score. Perhaps you will be pleasantly surprised—after all, you only need to score “average.”

I have lately become “addicted” to high range IQ tests, but I have yet to cover the spectrum of special abilities these tests challenge. “Addicted…”? Well, not really, but—almost! I am not an expert test taker—far from it—and some tests are more difficult than others. But, I much prefer sitting down and struggling through my latest high range IQ test challenge to paying “good money” to see the highly

flaunted yet pathetic, lukewarm, uncreative, poorly-directed and pitifully-portrayed vampire "flick" (movie) that is currently the rage. Maybe Hollywood needs more "high range" directors like George Lucas and Quentin Tarantino in its midst.

High range IQ tests are the next best thing to paper money and hot bread! But remember, an IQ test does *not* define us. Our lifetime of achievements, our ambitions our goals and our resourcefulness are far more valuable assets in our estimation of self.

Feedback on the article:

"Atheism" as a Logical Negation of "Theism"

In WIN ONE issue 8, Phil Elauria stated that: "There is some controversy over the validity of the excluded middle because we can have a scenario where the truth value of a sentence (and its relation to the world) is unknown or unknowable." As someone who has undergone quite a lot of formal training in mathematical logic, I would like to make a comment on that.

There are various non-classical logics which allow a propositional statement to take a value out of a larger set than just $\top$ and $\bot$. In this case it is possible to use a value for marking statements as undefined or unknown. However, it is never necessary to switch to a non-classical (multi-valued) logic. In classical propositional logic it is also possible to define a variable, let's call it d, which is $\top$ iff [i.e. 'if and only if'] the value of another variable v is known. The law of the excluded middle would still hold; if v then $\neg v$ must be $\bot$, and vice versa. But it is possible that we don't know the value of v. Therefore, to state in a formula that it is possible that v may be unknown or undefined, we replace every occurrence of v by $\mathrm{d} \wedge v$, and we replace every occurrence of $\neg v$ by $\mathrm{d} \wedge \neg v$. This is valid because the following statements hold:

$(\mathrm{d} \wedge v) \rightarrow v$

$(\mathrm{d} \wedge \neg v) \rightarrow \neg v$

From which follows

$\mathrm{d} \rightarrow (v \vee \neg v)$

Then we can express statements in which a variable is not necessarily known or defined with classical logic. We do not need multi-valued logic, and, as we see, the law of the excluded middle is not violated.

The only thing we must not do is make statements involving v that deal with the value of d for if we added the implications $v \rightarrow \mathrm{d}$ and $\neg v \rightarrow \mathrm{d}$ this would mean that either d would always be true or the law of the excluded middle would not hold.

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The Writer's Dilemma
(A Passionately Personal Paradox)

Thomas J. Hally

"People in the know" tell the writer he should write for at least 15 minutes per day if he wishes to become a great writer. Well, that may make better sense than reading for 15 minutes per day in the hope of becoming a great reader! But what if one writes crap much of the time, yet reads Shakespeare, Cervantes and the works of the great philosophers? Does that indicate that he may never publish a story, a poem or a book but will read all the others...? This is, needless to say, a disappointing hypothetical to theorize. The fact of the matter is that writers who write crap may not really give a crap about reading the crap that is oftentimes the essence of the so-called good or crappy writers, and, in all probability, many writers are semi-literate, like most mathematicians.

This "brings up" another interesting point: the hard-headed persistence of the convergent-thinking of the world's "advanced arithmeticians". With few exceptions, there have been no mathematicians who can effectively "think out of the box" or into and out of a rats' maze. So, just how do they make those earth-shaking scientific discoveries? They don't! Scientists do.

And what is the point of comparing a mathematician to a writer? These hard-science hard heads and their fellow travelers may even go so far as to tell us that a sentence uttered by a liberal arts type is pure garbage, worthless fluff. And this "fact", paradoxically will invalidate the "truth" that is next or was first uttered by said hard head. The poor mathematician (1) is the underdog in any argument (philosophical or otherwise) with a writer or any "liberal arts type". The mathematician is left without a fraction of a numerator to stand on as he argues the basis of his theoretical "truth", commonly known as the atheistic argument. Unable to defend his "truth" without being entrapped in contradictory ancillary theories, he is refuted and humiliated by the humble writer. So, what is the "truth"? Damned if I know, but it is certainly not a magical mistake. The atheist argues 'there was once absolutely nothing everywhere until absolutely nothing happened everywhere and the nothing exploded (for no reason) absolutely everywhere which magically created absolutely everything absolutely everywhere', or something like that. And they laugh at me...

And the atheists' negation of 5000 years of theistic history and evolution (**not** to be confused with so-called "Creation Science") is a genuine belly laugh. But, I am not "out to" prove the existence of God, or of a god, nor to disprove the nihilistic theories of many atheists. I am only interested in my self preservation and protecting and proliferating my narrow--or otherwise--interest of vindicating the writer. All Men are similar to each other in so many ways yet the mathematicians fear that reading and trying to understand a poem or a story will somehow and actually damage the neurons in their brains hence reducing the gray matter at their disposition. Horrors! Perhaps reading a poem will only drive them insane... ? No great loss, or at least only a temporary set back (...at best...). Let the skeptic remember that poetry does not (usually) roll smoothly and in a straight line from A to B to C then to D then end. No! A poem, rhyming or otherwise has rhythm and meter. Whether the versification be ABCD or ABAB and alternating (or etc.) there will be a full "mental-cardio-weights" exercise for as it takes to read said poem; a challenge to the brain. The poem may end with a real or hypothetical question. Now is the time to think!

An equation or series of equations (even a matrix) marches lock step from A to Z and never takes a detour. (At least there have been very few detours over the centuries, and virtually none by the common mathematician). Wonderful! Isn't that just ... boring...?

So, writer, write for just 15 minutes per day and improve the quality of your writing. Call upon your brain to provide you with the spice for your poetic word salad and the gravy for your prosaic stew. And remember to count your words and your minutes and ~ Write On!

(1) The reader may have figured out that there are two (2) principal metaphors in this mini essay. If not, well...

Here is a poem interpreted pictorially by the synesthete Greg A.Grove.

Juggler of Day

By Emily Dickinson

Blazing in gold and quenching purple,

Leaping like leopards to the sky,

Then at the feet of the old horizon

Laying her spotted face, to die.

Stooping as low as the kitchen window,

Touching the roof and tinting the barn,

Kissing her bonnet to the meadow, -

And the juggler of day is gone!

Emily Dickinson Eats Out

by Greg A. Grove

Be my Spaghetti
I'll be your Sauce
We'll jump in the Salad –
Tumble and Toss
We'll savor the Ranch
Find Home on the Range
Never mind the Fork –
It split for Spain.

Meeting In-flight, by Graham Powell

Through swirling clouds to the turquoise sea,
with a full summer moon, so large above,
a startling jolt of the trimming wing
and the heart-racing sound of the wheels that sing,
descending towards his lust-filled love,
and the soft-scented body he longs to feel.

A mile of warm, stimulating run,
three checks to cross till his goods appear,
a brief halt, the case is snatched,
a weighty turn, and all is despatched
towards the capacious space that's where
their luscious mouths meet, one on one.

Not Quite Carbon Copies

Her wishes were granted by a soul demented.
Her conscience rebelled and her spirit repented.
All desire so eagerly hoped for
vanished one day and now there is no more.

Today in charge of their instinctual urges,
they allow their conscience to choose all that it purges.
They live in an era of bloodthirsty competition,
yet she heals his soul with her loving, mystic vision.

She dreams of the day when her man will settle down.
The two will marry and start a family of their very own.
No longer a toy or a pretty domestic tool,
and the man that thinks she is is surely a fool.

The future is theirs and she will rule the roost
with the help of her man who will give her a boost.
No man is superior and no woman inferior.
Both carbon copies, except for the exterior.

Thomas J. Hally.

Two poems by Therese Waneck: Theresewaneck @ aol.com

The Lost Child

The cracked egg hatched
Pouring forth lava mountains
The unguarded yolk
The never born chick
Hiding behind the nest

Dying Dawns

Getting old young
Trembling knees
Under the spotlight of setting suns
Aging fast
Burning tomorrows

Renewal

A poem by Thomas J. Hally.

If it seriously dampens my spirit
and negative thoughts and actions bring me down,
I don't listen, I don't act, and above all I don't do it.
I avoid at all costs negative thoughts and actions
for they make me frown.

My humanity has journeyed through many a stage,
and my human spirit needs a lift now and then.
I see inspiration in many shapes and sizes and
correctly gauged,
It enters my spirit refreshing my body, my soul,
my intellect, my ken.

This divine process of human spiritual transformation,
begins with remorse at my nefarious thoughts and actions.
My human spirit clearly needs divine regeneration.
I am now ready for metaphysical interactions.

I am a new man; I live in a new nation.
Newly discovered life and love is served in generous portions.
It helps me suppress the pettiness of my generation.
But I cannot forget their rapes, their murders
and their extortions.

This is my life; I must move forward,
in a stalwart manner not reliving my past.
My spirit renewed; I shall no longer be froward.
Perhaps I am in Heaven at long last...

Another Friend Dies From AIDS

Written by Beaux Clemmons.

Another one of my friends died from AIDS. Heaven just stood there, as usual. I haven't heard any tears yet, but I have felt them. I haven't cried yet, but I feel them welling. Life is continuing, but it doesn't feel the same. I just talked to him a couple of weeks back, but now I may never again. Depressed, I rose from the bed trying to cope with this all-too-familiar reality. I stood up next to my bed attempting to figure out what to write about this evening, dismally, helplessly. As I've been inundated with a number of negative events lately, I fought through the clouds of confusion to find something poignant to talk about. Just as I was regaining clarity, I looked through my Venetian blinds. Across the street from me, in the front yard of the apartment, was a group of boxes and items that obviously belonged to someone who had been evicted while I was asleep. It lifted my spirits. As you can imagine. I guess I'm just tired of bad news. I guess I'm tired of bad sights. And I guess I'm just tired of bad events. The ugliest thing about having a friend die from AIDS is not just the emotional loss itself, but the fact that life continues to float on before your eyes without others seeming to care about the loss. They don't know. They're not psychics. And as you sit and contemplate the good times that the two of you shared, the clouds continue to move; the moon or sun continue to give off light; cars continue to drive by in ignorance. Somehow, you must find the strength to keep going, even though the specter of the disease might pay you a visit one day. And nevertheless, you must keep pressing on, counting the tombstones behind you or not, counting the days you have left or not, counting the crows above you or not.

I lost my first friend at about 15 to the virus. I remember seeing reports on television as a kid about how the disease was ruining people’s lives. And I was faint out of fear, not understanding how people were getting infected. When my first friend died, I was in a state of shock. I couldn't believe it. Growing up, I learned that we all must die, but why did my friend have to die in such agony and shame? His family didn't even announce his funeral, so I was unable to attend. They didn't even initially announce his death, so I was unable to commiserate. They didn't even care enough to inform those who loved him the most, so I was unable to deal with the loss with resolution.

Today, I think about us at the playground, at 14, talking about guys together, the dates we had had in those last few months, and I tear up wishing that he had had more of a respectable homegoing than his "moral" family allowed him to have. Death doesn't give a fuck about you. I'm learning that day by day by nefandous day. If my friends and associates and loved ones aren't dying from AIDS, they're dying from other things. Drugs. Strokes. Heart attacks. Kidney Failure. Accidents. Loneliness. Depression. Apathy. Or whatever. I've been told the Christian stories about Adam and Eve and the serpent in the Garden and as a Christian myself, the more I hear them, the angrier I become. I hear of God's mercy and love, and I wonder why He didn't show them to Adam and Eve IN the Garden. I wonder why He didn't show them to my first friend who died from AIDS. And I wonder why He didn't show them to my friend who just died this month. Then, I enter what I seriocomically refer to as my agnostic stance, and I imagine that God isn't there. And I turn vengefully to this heartless universe and pose the same inquisitions. I don't feel satisfied with answers from either. Tell me not of your religious "explanations"; of the world's "reasons" tell me not either. Another friend of mine died from AIDS and you went on to cook breakfast. You went on to get dressed for work. You went on to go to the bank to make another deposit. And, as I wait for his funeral date in angst, I am still unsatisfied. On the surface and below, it appears that we live according to "fortune." When our number comes up, it comes up. We can live, rendering death inevitable and blithely ignoring it, but often unsatisfyingly, it is the discommoding culmination of this inverted life. And it's hard since I don't feel built for it. I feel eternity in my heart, not transience. I feel everlasting love in my heart, not evanescence. I feel enduring curiosity in my mind, not temporality. However, when it's time to go, we don't get to pack. And it feels unfair. My friend died from AIDS and you had no way of knowing until now. Until I said something. And that's true of so many who fall victim to the fell claws of this grasping sickness. One moment you are laughing with, hugging, and cherishing your friend while alive, and the next moment you are left with an invisible contour in your arms, in your eyes, in your mind. You essay to vanquish the sadness and just when you find a bit of solace and serenity, something else looms into view that tries to bring you down even further. It hurts. And I didn't want to write about this at all because I was afraid to confront my bitter feelings. But I feel better for writing about him now. Because it wouldn't be right for me to judge you for happily cooking breakfast, dressing for work, and going to the bank without you knowing first. I close my eyes in sorrow wishing that I had the power of resurrection, the power to happily reunite loved

ones with each other now, the power to heal the world. I open my eyes realizing that I don't. With my eyes open, I realize that I am just as mortal and human as they who passed. And eyes opened, I realize that the world does go on, often not even caring that you died. The news selects "important" stories to publish, and the media chooses to do the same.

It's practical, I guess, considering how many of us pass each day...And if we had to read everyone's obituaries, we'd probably run into more deforestation issues with attempts to inform the living. Depression rates would probably be much higher. And the world, a much sadder place, I'd reckon...I rant; I speculate; I sigh. Nonetheless, another one of my friends has died from AIDS, and I'm sad. I'm angry. I'm discouraged. I wasn't by his side in his final hours. Hell, with what AIDS does to many people, disfiguring them, disgracing them before dealing its tour de force, he might not have wanted me or many others there anyway. I'm listening to a somber song now, reminiscing. Knowing, I have many friends who are still alive, fighting the disease. Hoping, in what feels like nothing. I've slept a lot over the last few days in not painlessness. In what has felt like, in fact, total ruin, I've ached because I want to be like Jesus and go to my friends, and yours, too, and say, "Come out. Be well. Live again. Rise," but I can't. It feels, morosely, like the stuff of story books now.

So, I end this with tears, sobering tears, in my eyes, aimlessly continuing, it feels like, to deliberate over the apparent futility of this life. Because another friend died from AIDS and his next home will be a casket. His next home is one that I do not know. Still, his home is one that, one day as all, I will come to inherit. 'Tis ineluctably saddening, yes. And so many don't want to deal with the darknesses of this life. But they are just as real as the brighter sides. And they deserve some of our attention, too. Maybe, in some visceral way, what I'm trying to communicate here is my Weltschmerz over the human condition. Apathy doesn't heal us as effectively as confrontation. Moreover, ignoring the sad things in this life does not make them go away. I feel like dealing with them, as they come, is the best way to learn how to cope. How to manage. And how to grow. Another friend dies from AIDS (SCREAM) and I am left with another void. Another void that I want you, this time, to clearly know is here. And allowing you to know it's here, shamelessly, makes me feel stronger, today.

As I recall… by Thomas J Hally

Since the late 1930s—the era of Sigmund Freud—psychoanalysts have known that emotions affect our cognition, without our awareness of the affecting mechanism. Emotions have a powerful impact on our memory; and it has been proven time and time again that our most vivid autobiographical memories are associated with emotional events. Memories of this type are recalled with clarity and sharpness of detail, and much more so than "neutral" memories.

Our emotion-enhanced memories are remnants of human evolution, and they have evolved through the process of trial and error. We have learned behavioral patterns that were debuted and repeated in actual life and death situations millennia ago. An example might be the behavior of a distant ancestor in a hunt for a mastodon or a saber tooth tiger. Uncle Charlie Caveman's reactions during these scary moments became genetically imprinted, and they are now called the *flight or fight response*. The flight or fight response (or "instinct") is a fundamental physiologic response that forms the foundation of modern day stress medicine. The flight or fight response is our body's primitive, automatic, inborn response that prepares the body to "flee" from or "fight" a perceived attack, harm or threat to our survival. (Let us assume that Uncle Charlie always made the right moves). The flight or fight response, even when artificially induced, heightens our memory retention by exciting neurochemical activity in areas of the brain responsible for our memories' encoding, retrieving and recalling. (This heightened memory retention that surfaces at or about the time the flight or fight instinct appears has been tested and proven many times in laboratory studies). When we find ourselves in a tense, emotional situation and we are feeling "stressed out," our respiratory rate increases. Blood is shunted away from our digestive tract and directed into our muscles and limbs, which require extra energy and fuel for running and fighting. Our pupils dilate and our awareness intensifies. As our sight sharpens our impulses quicken. Our perception of pain diminishes and our immune system mobilizes with increased activation. We are now prepared—physically and psychologically—for flight or fight. We scan and search our surroundings, and we look for "the enemy." In our 21st century world, we use adrenaline to help protect ourselves from a perceived enemy, whether it is an angry boss (whose name we suddenly cannot remember in a delicate social context) or a casual acquaintance we are introducing our girlfriend or boyfriend to; and our acquaintance just may be a rival for the affection of our new girlfriend or boyfriend.

When we process information in an elaborative[1] manner, our memory is enhanced. When we extract meaning from items we form inter-item associations, thus enhancing memory. *Arousal* enhances perception and memory of emotionally-arousing stimuli. "Arousal" also enhances perception and memory of stimuli that are high priority items and, in turn, impairs perception and memory of low-priority stimuli. The likelihood of processing emotional items is increased as attention is

focused and limited. High levels of arousal will lead to the narrowing of attention so that information central to the source of the emotional arousal will be encoded[2]. But extraneous details *will not* be encoded.

Like arousal, the concept of *valence* (highly positive to highly negative) enhances our affective memory experience. Non-arousing memories with marked positive or negative valence are remembered better than neutral items. *Memory consolidation* is both the stage of memory where storage takes place and the process of creating a permanent record of the information we have encoded.

The *mood-congruence effect* and *mood-state dependent retrieval* are contextual effects of emotion on memory. The mood-congruence effect explains our tendency to retrieve information easier when it has the same emotional content as our current emotional state: i.e., being in a depressed mood increases the likelihood of remembering negative events, while being in a happy, upbeat mood increases our chances of remembering positive events. It is generally agreed that our current mood affects that which is attended, encoded and retrieved. The mood-state dependent retrieval effect is a type of context-dependent memory. The retrieval of information from the memory is more effective if the time-of-retrieval mood matches the emotional state at the time of *encoding*: the moments when the memory was first "born" or formed. The probability of remembering an event is greatly enhanced by evoking the original emotional state, the state of mind during the initial processing of the memory.

In conclusion, our memories are enhanced by emotional content or our understanding of items or events. Emotionally-charged events are remembered better than unpleasant ones. Positive memories contain more contextual detail than negative or neutral memories, and this in turn, helps memory. Strong emotion has a tendency to impair memory for less emotional events and current information (emotion experienced at the time of retrieval). Our memories are helped or hindered by our emotional state, whether we are emotionally aroused (angry or elated) or in a neutral mood ("somewhat objective"). The mood-congruence effect refers to our mood when it matches the mood we were in when we first experienced the information. (The stronger the emotions aroused, the greater the effect on memory). Emotions can be evoked or "minimalized" willy-nilly by role playing as we express or suppress our emotions. The amygdala is the key player in the emotion-processing phase of memory. Other areas of the brain are also involved, namely, the cerebellum and the prefrontal cortex. Emotion and attention are related phenomena. Finally, emotion acts on memory at all points of the memory cycle: encoding, consolidation and retrieval. Emotion produces stress hormones, uses working memory capacity and involves related regions of the brain.

Elaborate[1]: adding to, subtracting from and otherwise editing items in our memories. Needless to say, remembered stories change frequently throughout the continuous process of elaboration and recall. By highlighting important items or episodes that may not have happened – or did not happen – emotion-bound memory may allow us to make better decisions and choices than a 100 percent picture-accurate memory would.

Encode[2]: the memory's process of interpreting of incoming stimuli and combining the newly-processed information, including the mediators of selectivity of attention and prioritized processing.

A Festive Meal.

"Please give me the comic, Otto," pleaded Anna.

"Okay, but listen… I won!"

"What?" queried Anna.

"Italian Job II, a computer game,"

And at that moment, in strolled Geoff:

"Sei fantastico," he exclaimed, having just heard the news, "and sorry, I don't know that in German – oh, and by the way, can I have the comic?"

"Nein!" said the German, having just placed it into Anna's outstretched hand.

"Soup then?" said Geoff, "tomato for lunch, I feel," and he set about getting the kitchen ready.

"A dry white wine as well?" proposed Anna, her lilting Italian accent making Geoff smile.

"And as our German friend has been victorious again, Seven Steps In Heaven white wine seems appropriate," mused Geoff.

"Sì! Five minutes and I'll have this table prepared," announced Anna, and all of them gathered round, smiling and salivating at the prospect of a sumptuous little meal.

The Challenge.

Now read the scene again and find the nine numbers hidden within the text. As the characters are from different countries, the numbers are not necessarily written in English, nor do the numbers themselves always appear – sometimes there are words which are homophones of numbers!! (Argh! I hear you cry.)

When you have found the numbers, *place the last letter of the word preceding the number* into the grid immediately below:

Then re-arrange the letters to form a word. In the next grid, one letter has been placed to help you.

						C		

Now move on to the next page, where the challenge continues!

Okay, write the word from the anagram along the top line of Grid Number One. (See below) Then, complete Grid Number One like a Sudoku, the other grid at the bottom of the page giving you the corresponding *numbers for the letters*, ***as discovered in the short scene***, which will guide you towards completing the Sudoku.

At the end, you should have the word from the anagram covering all of Grid Number One.

Finally, answer these three questions:

1) What number sequence do the middle squares within each of the nine sub-areas inside the grid follow? (To help you, they are marked in yellow in the guidance grid)

2) How is the shape of the number sequence connected with the solution to the anagram?

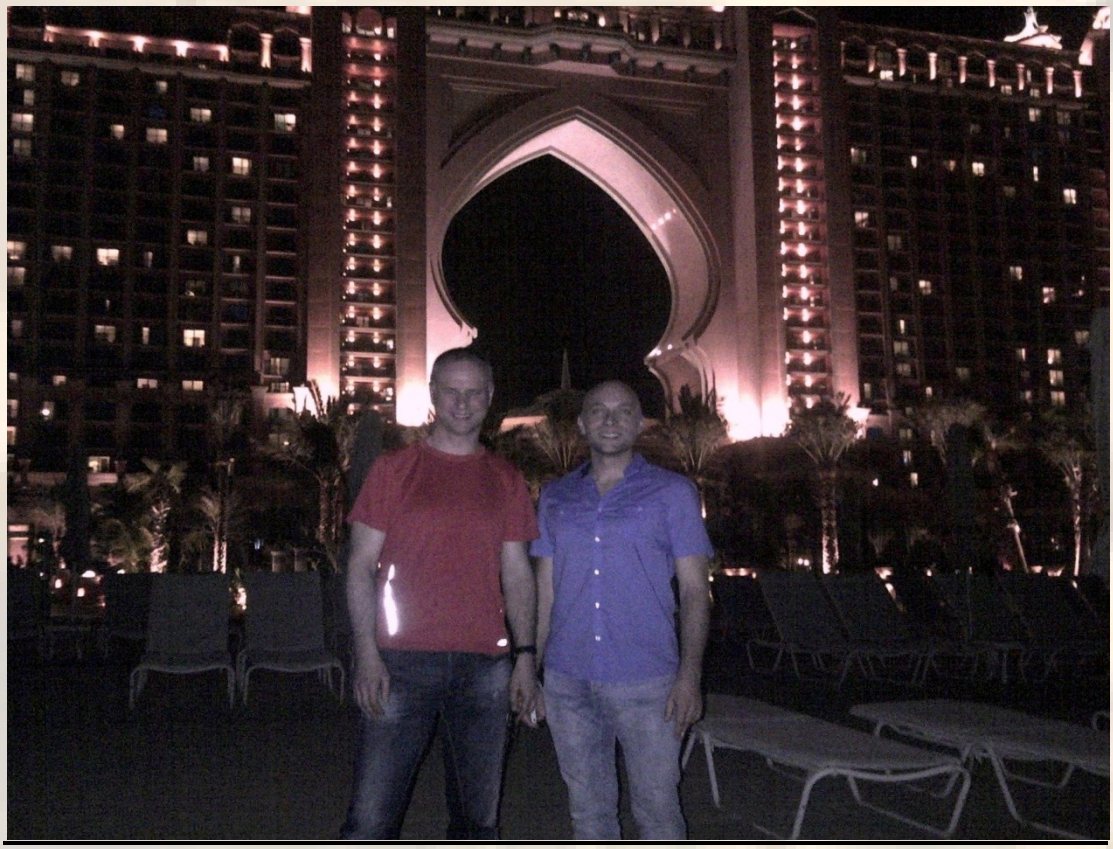
3) How are *the letters* within those central squares connected with the word at the top of the Sudoku?

Grid Number One

Guidance Grid

	1			*			*	5
	3				8	6		
		3		8			6	
	8		2	*	6	3	4	7
7		9			4			2
				3		2		
3	*	8		*	2		5	9
	2	6	9			8	1	

WIN Meetings



Graham Powell and Evangelos Katsioulis outside the Atlantis Hotel, Jumeirah Island, Dubai. The picture was taken by Manahel Thabet in April 2013. *Below*, Graham Powell, Manahel Thabet and Karyn Huntting Peters met at the Ritz Carlton, Dubai, on 30th June 2013.

Gödel and the Limits of Computability

By Claus D. Volko

Kurt Gödel showed in the first half of the 20th century that a formal system in which mathematical and logical statements can be expressed must be either incomplete or inconsistent (the First Incompleteness Theorem). Furthermore, he stated that a consequence of a formal system being consistent is that this consistency is not provable within this very formal system (the Second Incompleteness Theorem).

Both theorems can be easily deduced using computability theory when considering that completeness basically means that each statement must be decidable and have consistency, that is, whenever a mechanism associated with the formal system (e.g. a Turing machine) comes to the conclusion that a statement is provable, this statement must indeed be provable; and when the mechanism comes to the conclusion that a statement is not provable, this statement must not, indeed, be provable. Paradoxical statements, having the property that the assumption that they are provable leads to the conclusion that they cannot be provable, and the opposite assumption that they are not provable leads to the conclusion that they must be provable, cannot be decided by a consistent system. For this reason, consistent systems are not complete, which is equivalent to the statement that complete systems cannot be consistent. The Second Incompleteness Theorem in particular can be shown by arguing that a formal language, in the sense posited by Gödel, must be recursively enumerable, but must not be recursive in order to be consistent, since recursive languages cannot be consistent as each statement of a recursive language must be decidable, and paradoxical statements are not decidable. The problem of deciding whether there is an undecidable statement is itself undecidable.

This is especially relevant to the question concerning the limits of computability. Gödel himself believed the human mind to be much more powerful than any computer since the human mind is able to compute things not computable by a computer. I believe that it would be interesting in this context to conduct research on detecting paradoxical statements by a Turing machine. Of course the more general problem whether a statement is decidable is undecidable in itself since it is equal to the so-called Halting problem, that is, the problem whether a Turing machine terminates on any input, or whether there is some input which will lead to an infinite loop; however, this concerns decidability in general. Paradoxical statements are themselves a particular subset of the set of statements whose provability cannot be decided. Perhaps it would be possible to program a computer to work correctly at least with this subset.

If the hypothesis is true that intelligent reasoning is nothing but a form of computation, this implies that any computer would be able to reason in a way that is as intelligent as any human being - if anything that the human mind is able to compute can also be computed by a computer. Gödel doubted it. Currently it is not possible to judge whether Gödel was right, and if he is really right, maybe this will never be provable (as it is infinitely more difficult to prove that something is impossible than to prove that it is possible - cf. the P-NP problem).

Claus D. Volko, cdvolko @ gmail.com

Epigrahams:

some thoughts by Graham Powell

Home is where the heart is; the universe is where the mind is.

Thinking is a synecdoche, for each thought is just a part of the whole universe.

Each day, taking time to review our progress will, in itself, promote and evolve a positive attitude.

Sometimes progress is about discovering what doesn't work.

The Sun is brilliant each day but never vainglorious; be like the Sun.

With incessant insults, people belittle themselves, until, eventually, they become like dots, points of no return, and merely full-stops in the dialogue of the universe.

To focus well on the road ahead, it needs to be going uphill.

If you feel like saying a four-letter word today, say "Love."

Love is mightier than the pen.

Kindness is something we can all afford to give.

Giving a smile to each person we encounter makes us richer than all our money.

We can all be wise because wise people never condone war.

The great challenge for humanity is not the realization of the information technology revolution, but to make sure that this revolution benefits every being on Earth.

It's time to have a work culture where organizations invest in giving enough resources to promote and realize the workers' desire to improve their work.

Good leaders make those around them believe that they are doing their utmost for everyone involved.

Man may be a political animal; but he must be wary of becoming more of an animal than a human being when politics comes to dominate his life.

Some things to bear in mind are that there is much more to know; that all a person has learnt is better used not to expose invidious ignorance, but to inspire enlightenment, to appreciate new discoveries, and to rejoice in the sharing of all these things for the perceived benefit of every being on Earth.

May you reflect on the positive aspects of the past, plan and hope for the future, but most of all realize that we have to live and adapt most readily in the present.

After the immediacy of an action, in the long term, it's how others perceive and record what you've done which counts.

The Editor's Anagdoku.

After reflecting on the above thoughts, below is an anagram and Sudoku combined, which I hope you will enjoy. Use the letters **in black** to compile *a three-word phrase*. The phrase appears *twice* in the puzzle. Follow the indications and place the phrases into the grid; then complete the grid as you would for a Sudoku. The letters in red are there to give you further clues on how to fill-in the Sudoku. Have fun!

T					N		N	
	E	W			O	I		
			E			W		T
			E	O		H	I	
	O	N		W				N
	I		H		N			
N		T		H			O	
			N	T	W		E	H
E	N			E		N		W

X-Test Solutions Finally Revealed!

Marco Ripà (July 2013)

sPIqr Society, Roma, Italia
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1. Introduction

This is the first time I know that all the solutions of a recognized IQ test for the high range (high range IQ test, or HRT) have been shared online by the test creator himself.

I have decided to share the solutions to discuss about HRTs' common flaws, as you can read here: High Range IQ Tests (Big) Flaws → [http://www.scribd.com/doc/144702702/HRTs-Big-Flaws].

The X-Test remains valid if you took it in the past (it is accepted by more than twenty high IQ societies − the rarity level ranging from 95th percentile to 99.999th percentile), but it will no longer be scored (obviously).

2. An "official" self-evaluation IQ test for the high range? Here it is...

I do not know if anyone has already realized that, sharing the X-Test solutions on this paper, I am creating a real IQ test for the high range (up to IQs above 170) that Mr. Brown can take at home and without paying one cent: he can evaluate his own "official" IQ score at any time. This score can be higher than the ceiling of most famous supervised/professional/standardized IQ tests, such as the WAIS IV, CFIT III (form A+B), Figure Reasoning Test, Raven's Advanced Progressive Matrices, etc.

You can find my last norm by following the link below (so you can calculate your own IQ score by yourself in a few seconds):

X-Test Second Norm → [https://app.box.com/shared/hki33xb9qy].

N.B.

If you need a little help to calculate your rarity IQ score (percentile), you can take a look at the following table: IQ Percentile and Rarity Chart → [http://www.iqcomparisonsite.com/iqtable.aspx]. E.g., your total (RAW) score on the X-Test is 21/46→the X-test second norm gives you an IQ score of 137.7 using a standard deviation of 15→your percentile (among the unselected adult population) would be 99.4→your IQ (according to the X-Test) roughly corresponds to 1/(1-0.994)=167, which means 1 out of 167 unselected adult people.

3. The test and its solutions

Two versions of the same test have been released (due to cheating problems) since 2010. You can find the latest version here: X-Test (Second Edition) → [**https://app.box.com/shared/2bon4ctj8d**].

The solutions below refer to the second (last) edition of the X-Test:

Part 1:

1) 81,49,25,9,? (1)

2) ..,903,946,?,1035,1081,?,1176,… (990, 1128)

3) 1,1,3,4,5,9,7,?,? (16, 9)

4) A,BB,?,GGGG,MMMMM (DDD)

5) A1,2,B4,6,C12,15,?,? (D30, 34)

6) 135,531,315,513,351,? (153)

7) QIOIIQIIIOIIII?????? (QIIIII)

8) 5,565,56765,5678765,? (567898765)

9) 1001,10001,101,100001,?,1000001 (11)

10) 12345,3579,81216,2028,? (48)

Part 2:

1) 2,X,4,W,6,U,8,R,?,? (10,N)

2) 11111111111111,22222222,333331,4444,? (5551)

3) A3,N3,M4,O0,I? (1)

4) 13579,2468,357,?,? (46,5)

5) I1I1I1I1I, ?, III1III1III, IIII1IIII (II1II1II1II)

6) I1I1I1I1I1I, II11I1I11II, ? (III11111III)

7) ABACDDCEFFFE? (GHHHHG)

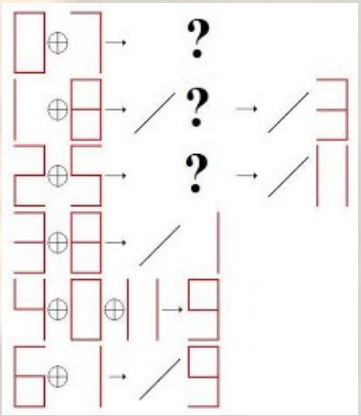
8) 135711, 4222, ?, ?, 2
<u>TWO solutions are available both were scored as "correct"</u>: (00-2,-20) and (002,20)

9) 891?1112, 6364656667 (0)

10) 7,222,1,8,333,-1,?,555,?,10,?,-14 (9,555,-6,10,888,-14)

11) q1w2e3?t5?? (r,t,y or r,t,z) → Both were scored as "correct" (depending from your standard keyboard/home Country)

12)



Solution: L, E, 11 (or "L, E, | |")

13 a) –

1
2
4
1 2 3 588 16 4 1 (In fact, 588=4+8+64+512)
64
8
1

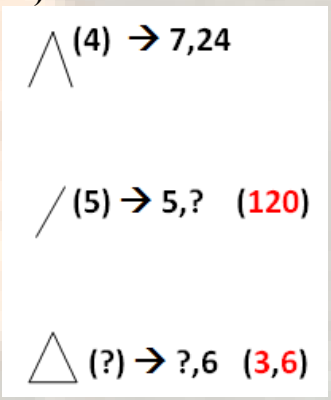
13 b) –

11			12			2
	110		144		2	
		1158	1728	3		
9	81	729	O	27	9	3
		422	216	91		
	56		36		20	
8			6			5

14)

```
      → A
    A L A
  A L ? L A
A L ? T ? L A      ? = (R)
  A L ? L A
    A L A
      A
```

15)

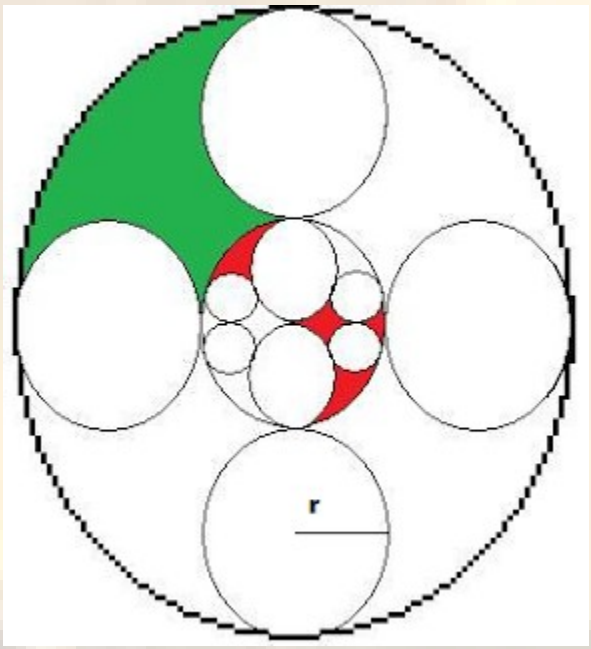


Part 3:

1 – What is the "green area"/"red area" ratio? (You can use only simple maths)

N.B.

All the 5 medium size circles are equal and they are encrypted in the BIG one, the same for the smaller circles encrypted in the medium circles.

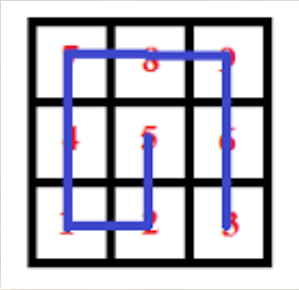


(First we can notice that double the sum of the red areas is equal to the middle circle's area subtracted from the area of the six circles inside..
You know that (if "r" is equal to the range of the central circle) the ranges of the two internal circles are r/2. If we call "x" the range of one of the smallest circles, we can use Pythagoras's theorem: (r/2+x)^2-(r/2-x)^2=(r-x)^2-x^2. This means **x=r/4.**
We can find out the red area: it is **RED**=pi*r^2-2*[pi(r/2)^2+2*pi*r^2]=**1/8*(pi*r^2)**

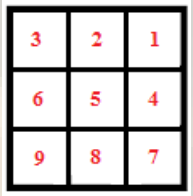
The area of the BIG circle is W=(pi*(3r)^2)=9*pi*r^2, so the green area is **GREEN**=1/4*(W-5*pi*r^2)=(1/4*4) *pi*r^2=**pi*r^2** (the green area is equal to the area of one of the r range circles).

The asked ratio is: **GREEN/RED**=(pi*r^2)/[1/8*(pi*r^2]=**8**).

2) Draw this shape: 521478963 (it is a (square) SPIRAL on the calculator)



3) Discover the hidden word: 13825-285-3869-97285 (TILT



)

4) Decrypt this message
752-845-52-8412-82 // 841-781-7-7451-8451 (SUPER SMART– standardized akin-Braille)

5) UNSOLVED ITEM) Decrypt this message
12-145-125-1235-135-23-125-14-1245-2345-235 (COMPLIMENTS – modified akin-Braille)

6) UNSOLVED ITEM) Decrypt this message that you are reading on a monitor
11111010-0000XXXX 10101111-000XXXXX (MORSE CODE – using Morse code, indeed)

In this paper you can find the complete X-Test solutions: here is Part 4. Part 4 is the last and the hardest part of the whole test, the part which I designed thinking of IQs above 150 s.d. 15. Item 15 was designed by me thinking of IQs above 170 s.d.15 and it remains one of the three unsolved items in the whole test (together with items 5 and 6 of Part 3).

Part 4:

Numerical sequences (the X represents hidden elements and/or elements that are impossible to make explicit):

1) You are in a decimal system. You can use only two integer numbers – from 0 to 9 – (different from each other) and relate them using only two of the following operators (you cannot use the same operator twice): What is the greatest number you can obtain? You can also insert the "( )" to choose the order of the operations. ((8^9)!)

2) 567891234, 68954123, 89563412, ? (956824341)

3) -3,X,0,X,3,333,6,66663,9,?,?,.. (999999999,12)

4) SOC0, V2, ILT5, MNFH14, WEI? (WEI9 - in fact, A=N=3, C=O=0, etc... you have to cosider the original font I used in the original .docx/PDF which you can find on Box.net)

5) 5,5,1,6,0,2,4,?,1,3,7,-2,0,?,4,?,-3,-1 ,… (5,5,1,6,0,2,4,-1,1,3,7,-2,0,2,4,3,-3,-1 - see item 8)

6) i,0,1,? (i,0,1,1.4142… - sqrt(-1), sqrt(0), sqrt(1)--> sqrt(2))

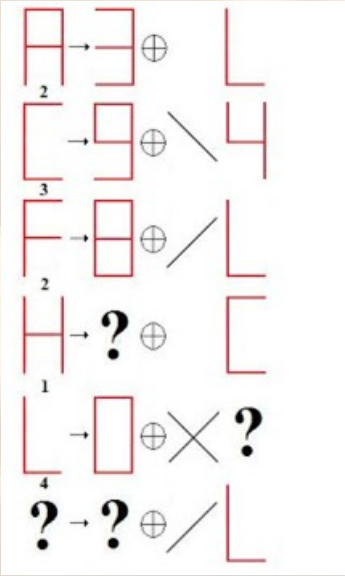
7) You know that 26=(5*5)+1: EIMQU,CGKTX,?, EIMQU (AJNRWZ - you have to draw a (5x5)+1 square grid of letters)

8) 10,10,1,11,0,2,4,X,?,?,?,... (10, 10, 1, 11, 0, 2, 4, X, 1, 3, 12,... - This item is connected with item 5)... IMHO it is a common flaw belonging to most of widely accepted HRTs!!)

9) Y*Y=Z Z-1=1111 ; find the value of y, the solution is not sqrt(1110) (y=sqrt(16)=4=100)

10) 0,0,4142,7320,0,2360,4494,? (the solution is 6457) (You have to look at the decimal parts of sqrt(1), sqrt(2), sqrt(3), sqrt(4), etc...)

11) 2,5,7,23,?,53,73,..



(The solution is: 3; L; P, 6 - you can draw it on the .jpg figure, obviously)

12) ?,17,24,38,59,94,153,?,?,… (?,?,? = 1,..,377,993 - base 17, why not?)

13) You know that *e*=2,71828182845904523536028747135 2.. and *pi*=3,14159265358979323846264338327 9..; complete the logical sequences:
a - 101011101011X110???... (X,X,1)
b - XXX234536???... (4,7,8) [comparison between "e" and "pi"]

14)
a- ?,F,O,N,C,B;10,9,8,7,6,5 (Ne - periodic table of the elements, do you know it?)

b- C, T, S, P, ? ; ?, 3, 4, 5, X (H, 1 - same thing as above: Circle, Triangle, Square,...)

15) UNSOLVED ITEM) You have to translate the word GONIOMETRIC in a strange alphabet related to "the area of a circle with unitary range", you know that the word CIRCLE is represented by LQXUE: how will you write GONIOMETRIC? (PWTRMIUUH)

Cicle→*pi* (3.14159265358979328...) Area→*pi*^2 (9.869604401089358)
(PWTRMIUUH) (Option 2: PWTRMIUF→ 0,5 points out of 1)

These people feature in this magazine. Can you identify them?

A

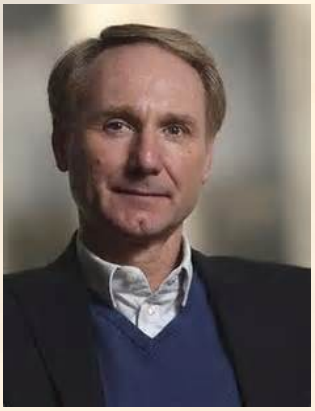
B

C

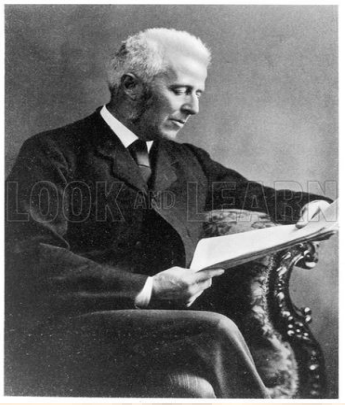
D

E

F



G



H

I

J

Which person is only mentioned in this WIN ONE as an answer to this quiz?

http://www.youtube.com/watch?v=qe5V3Z_LanQ&feature=c4-overview&list=UU1HdOBYsczXIBh-C9Y_0sbA

ABOUT "CODIN' CODE AL CODA" by Alan Wing-lun

This music code puzzle took me about 1 month to write (or should that be 'composed'?) in June 2012, and was first published in the WIN ONE magazine. After that, the puzzle and its corresponding YouTube video were shared widely on facebook and other websites.
Despite running a prize competition in Nov 2012, I did not receive any correct answers. It was not until April 2013 that I received correct answers from 2 people, working independently, within 24 hours.
Originally I had planned to release more coded messages in the "Codin' Code" series. Although I had received a lot of praise about the originality and beauty of this puzzle, to my knowledge, all but two people have found it uncrackable. Therefore, only two in the series have been written.
The answer has been a very jealously guarded secret.... until now!
If you have enjoyed this puzzle, please search on facebook and 'Like' my page, "Alan Wing-lun's Original Puzzles", to receive brand new puzzles in your newsfeed regularly.
I am also writing a book filled with my original puzzles, quizzes and coded messages, which I plan to publish in the near future.

THE ANSWER REVEALED.

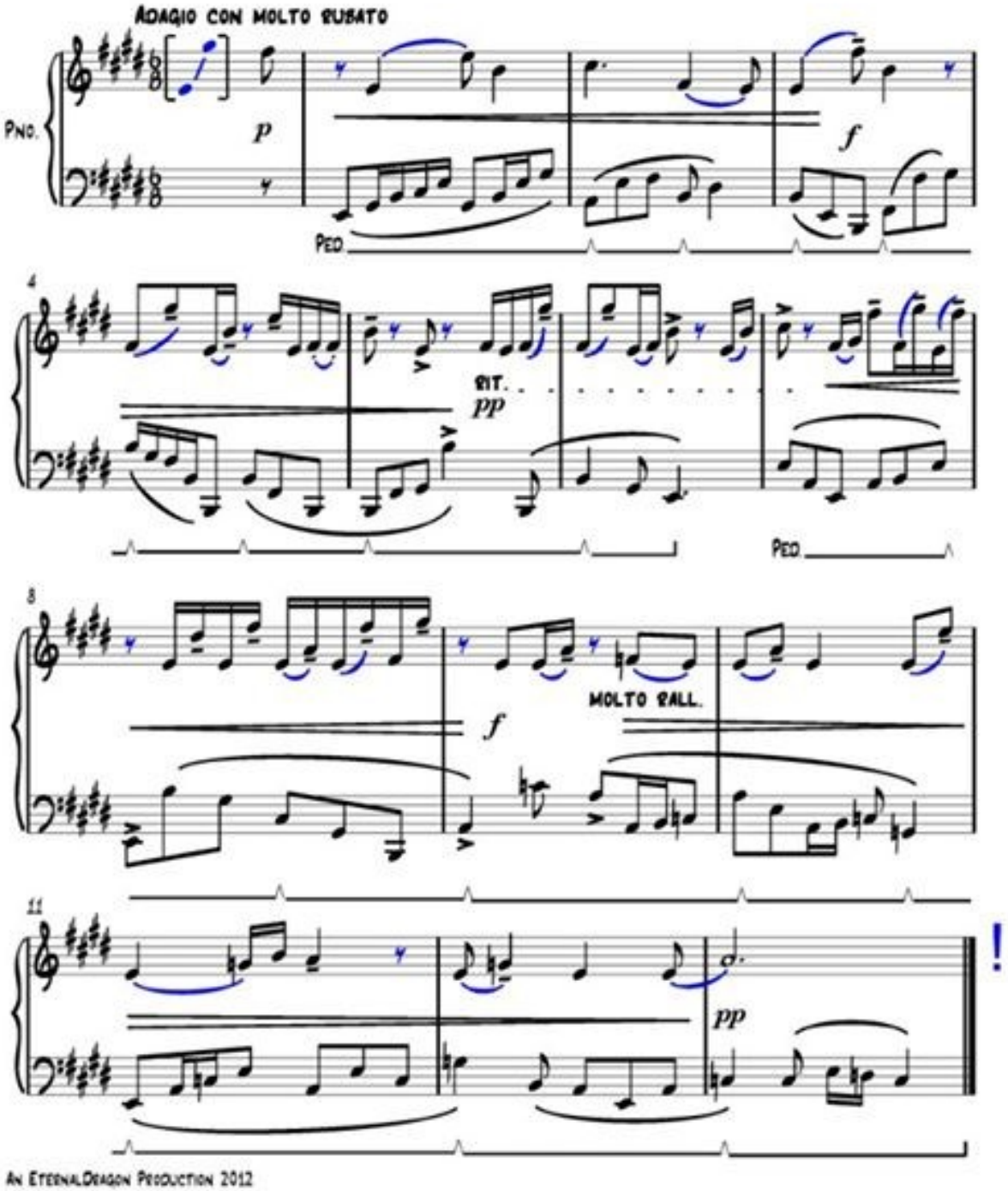
This puzzle uses a substitution cipher to hide a message within a musical score with notes to represent letters of the alphabet.
"Everything blue is a clue. Separate the data that is not needed. The message is ALL RIGHT" in the instruction means that there is a lot of data that can be ignored, especially the entire left hand part in the lower stave. Certain types of musical elements (left hand harmony, Italian musical terms, dynamics, time and key signature, etc) that do not contain any blue can also be ignored. Now we are left with just the notes, slurs and rests in the right hand part (the upper stave).
"The duration is only important WHERE it rests" means that note values (quavers, semiquavers etc) are irrelevant. Only their order and position on the stave are needed. The location of each quaver rest marks the word spaces.
The title of the puzzle, "Codin' Code AL Coda" is also in blue.
"Codin' Code" = "Code in code" meaning that the message is encrypted twice.
The pitch range at the start of the music is indicated as covering ten notes, either lines or spaces, on the stave.
We can number these from the bottom as 1-9 with the top line representing zero.
Each of these numbers indicates a position in the alphabet: 1=A, 2=B, 3=C, ... 25=Y, 26=Z, etc.
Where notes are joined by a slur they become two-digit numbers. The decoded message reads:

"I refuse to have a battle of wits against an unarmed man!"

Codin' Code Al Coda

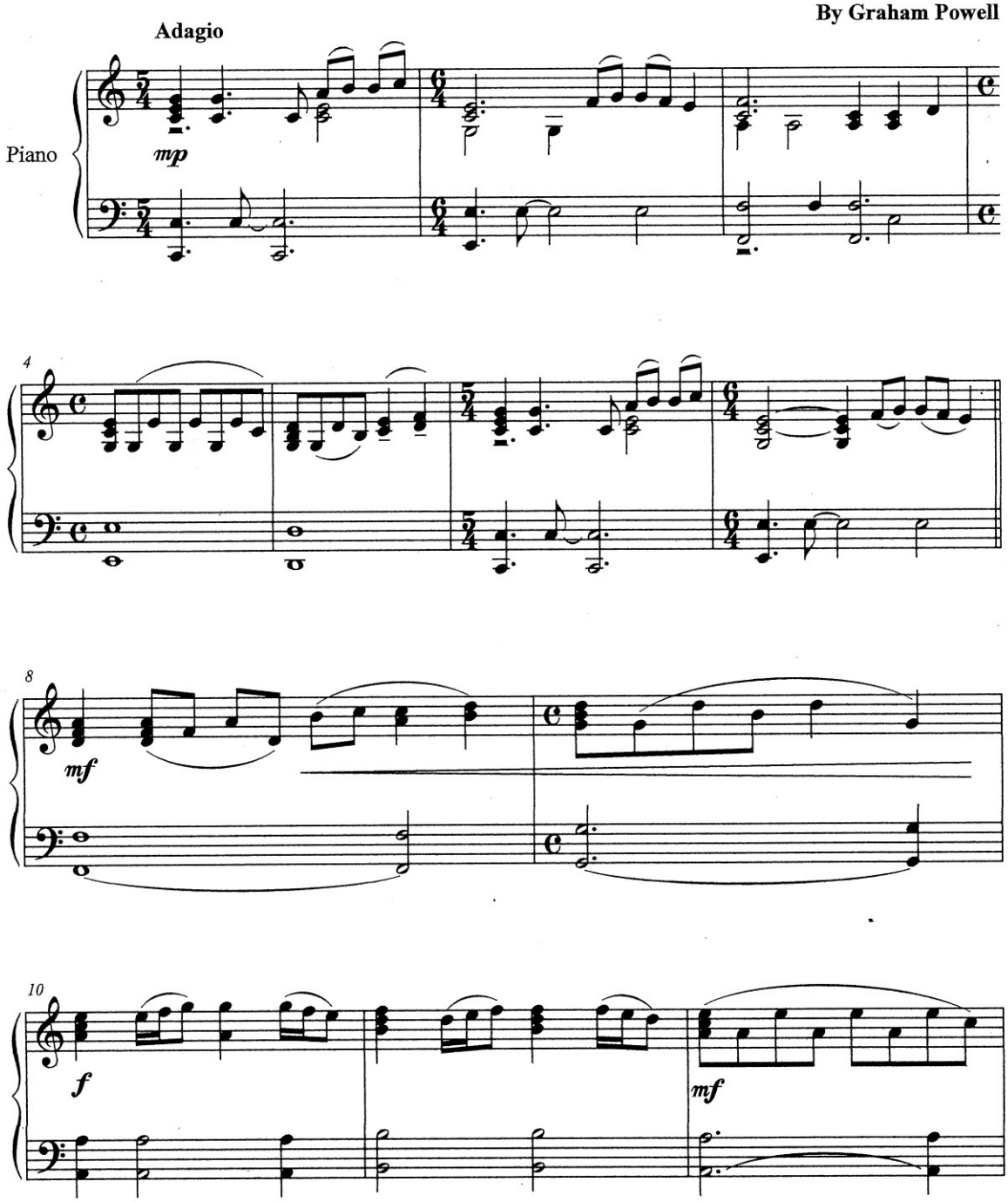
Everything Blue Is A Clue
Separate The Data That Is Not Needed
The Duration Is Only Important Where It Rests
The Message Is ALL RIGHT
What Am I Trying To Say?

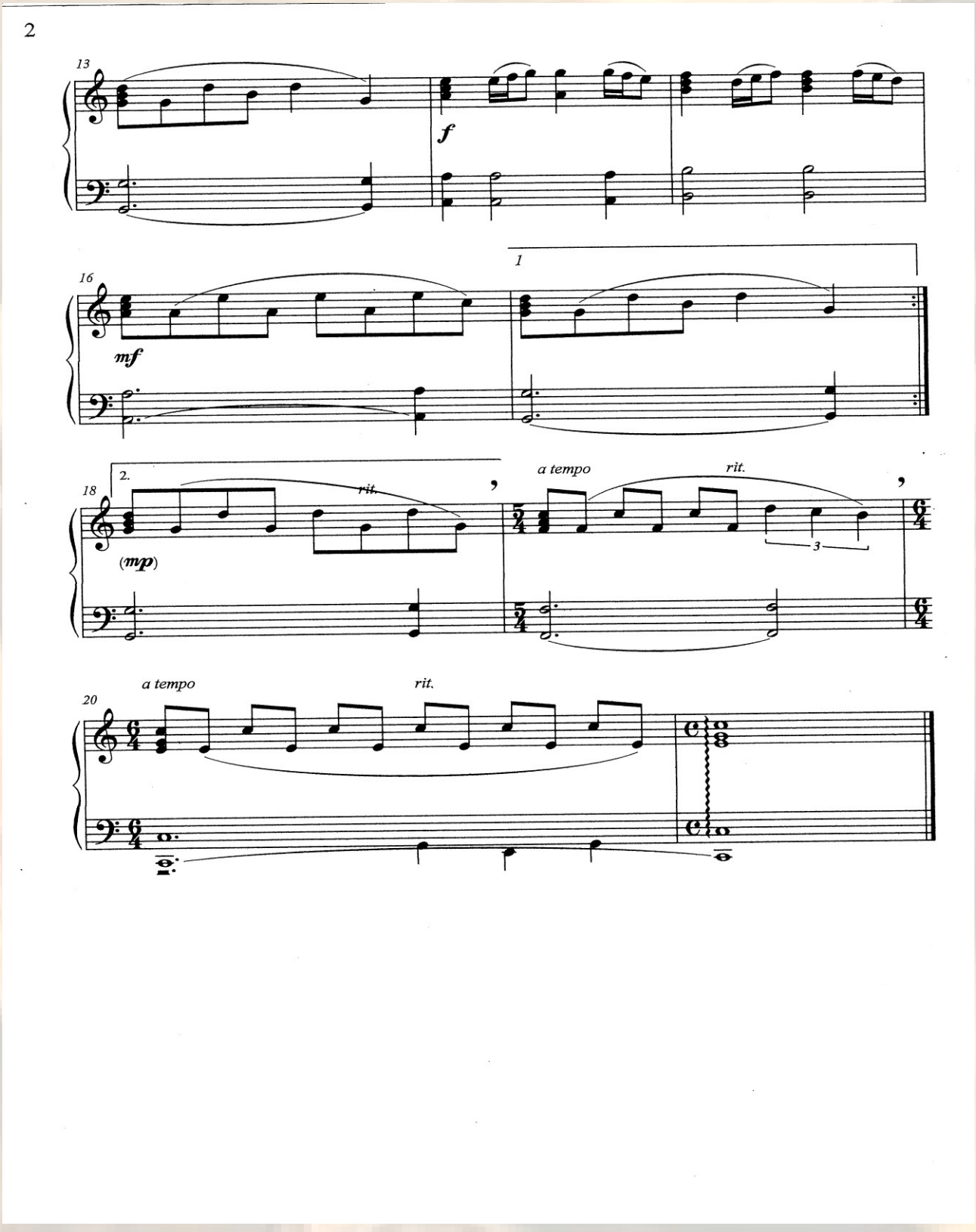
By Alan W. Ho
For Up To Two Clues Contact
www.facebook.com/alan.winglun



Theme from Love, Injury, Fear, Embarrassment

By Graham Powell





The answers to the puzzles within this magazine are on the next few pages.
If you do not wish to know the answers yet, *stop reading here*.

A Festive Meal.

A short scene by Graham Powell

"Please give me the comic, Otto," pleaded Anna.

"Okay, but listen… I won!"

"What?" queried Anna.

"Italian Job II, a computer game,"

And at that moment, in strolled Geoff:

"Sei fantastico," he exclaimed, having just heard the news, "and sorry, I don't know that in German – oh, and by the way, can I have the comic?"

"Nein!" said the German, having just placed it into Anna's outstretched hand.

"Soup then?" said Geoff, "tomato for lunch, I feel," and he set about getting the kitchen ready.

"A dry white wine as well?" proposed Anna, her lilting Italian accent making Geoff smile.

"And as our German friend has been victorious again, Seven Steps In Heaven white wine seems appropriate," mused Geoff.

"Sì! Five minutes and I'll have this table prepared," announced Anna, and all of them gathered round, smiling and salivating at the prospect of a sumptuous little meal.

The Challenge.

Now read the scene again and find the nine numbers hidden within the text. As the characters are from different countries, the numbers are not necessarily written in English, nor do the numbers themselves always appear – sometimes there are words which are homophones of numbers!! (Aargh! I hear you cry.)

When you have found the numbers, *place the last letter of the word preceding the number* into the grid immediately below:

C	I	B	F	C	O	A	N	I
Otto = 8	Won = 1	II = 2	Sei = 6	Nein = 9	For= 4	Dry = 3	Seven = 7	Five = 5

Then re-arrange the letters to form a word. In the next grid, one letter has been placed to help you.

F	I	B	O	N	A	C	C	I

Now move on to the next page, where the challenge continues!

Puzzle Answers

Here are the three questions plus their answers :

1) What number sequence do the middle squares within each of the nine sub-areas inside the grid follow?
   From the top left, they go around the Sudoku forming a sequence from one to nine. I=1; B=2; A=3; O=4; I=5; F=6;C=8 and C=9. (Now shown in green below)

2) How is the shape of the number sequence connected with the solution to the anagram?

   The number sequence makes a helical shape. (Shown in yellow below) Helical shapes in nature conform to Fibonacci's Golden Ratio.

3) How are the letters within those central squares connected with the word at the top of the Sudoku?
   They are also an anagram of 'Fibonacci'.

Grid Number One

F	I	B	O	N	A	C	C	I
C	I	O	F	B	C	N	A	I
C	A	N	I	I	C	F	B	O
B	O	A	N	C	I	I	F	C
I	C	I	B	C	F	A	O	N
N	F	C	A	I	O	I	C	B
O	C	I	C	A	I	B	N	F
A	N	C	I	F	B	O	I	C
I	B	F	C	O	N	C	I	A

Guidance Grid

	1			2			3	5
	3				8	6		
		3		8			6	
	8		2	9	6	3	4	7
7		9			4			2
				3		2		
3	7	8		6	2		5	9
	2	6	9			8	1	

Congratulations if you managed to complete all the assignments!!

The Anagdoku Answer Grid.

The phrase is “The Win One,” and it is placed it in the grid as indicated below.

T	H	E	W	I	N	O	N	E
N	E	W	T	N	O	I	H	E
O	N	I	E	E	H	W	N	T
W	T	N	E	O	E	H	I	N
H	O	N	I	W	T	E	E	N
E	I	E	H	N	N	T	W	O
N	W	T	N	H	E	E	O	I
I	E	O	N	T	W	N	E	H
E	N	H	O	E	I	N	T	W

And finally, the famous people photograph quiz…

Leonardo Fibonacci

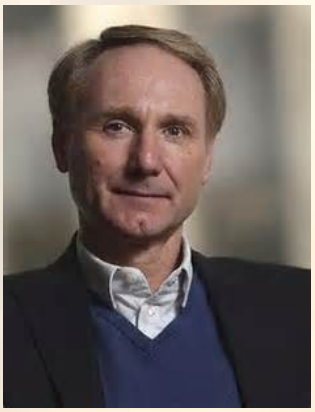
Kurt Gödel

Arthur Conan Doyle

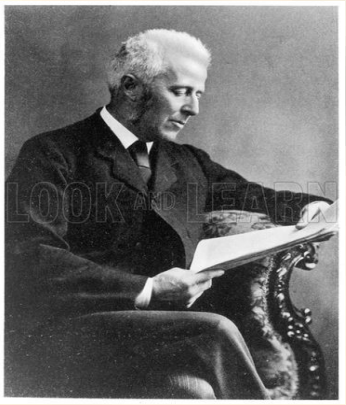
George Edalji

Alfred Binet

Steven Pinker



Dan Brown



Joseph Bell

Lewis Terman

Emily Dickinson

Dan Brown is mentioned above, but not in any other part of the magazine.

I hope you enjoyed this magazine.

All opinions expressed in the magazine are solely those of the contributors.

Graham Powell.