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SCHOOL OF COMPUTER SCIENCES

**WALL
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Ethical Values Essential Unit Cell of Career Block

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Dr. I.S. Sandhu

In this modern era, the human is becoming more and more techno savvy day by day. The industrial revolution is continuously guiding

and shaping the human behavior as per the ever changing technological standards. Achieving success is important but it is very hard to maintain it. The height of success may be achieved through a shorter route for a while but it is no substitute to the experience one has attained through the long path of struggle even in shorter time. The only difference is that the longer path is propagated with ethical values as career waves. The person with highest ethical values is the richest person, even he or she is extremely poor in terms of money. The ethical value creates great faith; faith further creates impression, a must have for career growth, which in turn results into progress, which further leads to prosperity. On the other way round, success without ethical values may create unsustainable career leading to short lived prosperity.

The ethical values may be segregated into Social Ethics and Work Ethics, but both rely upon the fuel of honesty and hard work to flourish. Family is the primary element to shape social ethics which in turn shapes the work ethics of a particular community,

region or nation. The developed countries have witnessed high social and work ethics which surely is the root cause of their high per capita income and sound economic, social and technological advancement. Our university has defined ethicality as one of the pursued values. Ethicality requires “in all of our actions high morals, tolerance, acceptance of difference, and honesty towards ourselves and others”.

As an academican, I consider following ethical values for a true mentor, motivator and teacher:

- * Exploring oneself as teacher and then researcher.
- * Treating the students equally and assessing them appropriately
- * Giving credit to students when their work promotes their learning
- * Mentoring students to alter their working methods if they distract the learning of others
- * To put a check on and rectifying dishonest activities e.g. plagiarism or cheating with positive approach.
- * To become a role model for the students and for colleagues.
- * To ensure better learning of students and respect their views and appropriate feedback given by them for continuous enhancement of teaching.

To conclude I wish to say:

*Ultimately, The Quest for Organizational Transformation
Must Begin With a Personal Commitment Within Each
Individual to Pursue Moral Excellence.*

Semantic Web - The Story so far

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In around 1980's significant research appeared in Information Science Literature for improving the search results while developing Expert Systems. Significant research work started as a result, Hundreds of universities, start-up companies, and major corporations published research and filed patents on various algorithmic techniques for machine-aided searching over three decade. By the late 1990s and early 2000s, these technologies began to be described as semantic search components. In 2001 **Tim Berners-Lee** published an article in Scientific American proposing a **semantic web** evolving out of the expanding worldwide web.

"I have a dream ... [where computers] become capable of analyzing all the data on the web -- content, links, and transactions between people and computers. A 'Semantic Web', which should make this possible, has yet to emerge, but when it does, the day-to-day mechanisms of trade, bureaucracy and our daily lives will be handled by machines talking to machines. The 'intelligent agents' people have touted for ages will finally materialize."

-Sir Tim Berners-Lee, 1999

More simply Semantic Web can be termed as “ an extension of the current web in which information is given well-defined meaning, better enabling computers and people to work in co-operation”. This Web of structured data would enable automated assistants (called software agents) to operate on behalf of human beings. The Semantic Web is not a new computing environment but rather an extension of the existing Web. Semantic data that provides a machine-readable “meaning” of information is layered over the information that is provided for people.

Semantic Web technologies as a whole have made tremendous strides in the last decade which include:

- The **Open Linked Data movement** has grown massively every single year and contains far more information than any single resource anywhere on the Web.
- Massive organizations such as Merck, Johnson & Johnson, Chevron, Staples, GE, the US Department of Defense, NASA, and others now rely on Semantic Web technologies to run critical daily operations.
- The Semantic Web standards RDF, SPARQL, OWL, and others were merely drafts in 2001, but they have now been formalized and ratified.

Truly, an entire industry has been born in the past ten years, complete with multiple trade shows on several continents, a growing user community, and active standards bodies. In spite of recent huge strides on the part of Schema.org, Facebook's Open Graph, and others, the vision of an entire Web of interoperable data has still not yet been realized. The learning curve for using Semantic Web technologies is till date steep because few educational resources currently exist for users new to the concepts, and still fewer resources can be found that discuss when and how to apply the technologies to real world scenarios

Impacts of Mobile Phone Radiations on Humans

Naveen Sharma, Assistant Professor, School of Computer Science, Chitkara University, Punjab

INTRODUCTION:

Number of Mobile users are increasing day by day throughout the world. With 1.9 billion cell phone users worldwide (208 million alone in the U.S.), they have become a technological fixture and they are not going away anytime soon, so with this effect of mobile phone radiation on human health is the subject of recent interest. As of November 2011, there were more than 6 billion subscriptions worldwide.[1] Mobile phones use electromagnetic radiation in the microwave range. Other digital wireless systems, such as data communication networks, produce similar radiation. In 2011, International Agency for Research on Cancer (IARC) classified mobile phone radiation as Group 2B - possibly carcinogenic (not Group 2A - probably carcinogenic). That means that there "could be some risk" of carcinogenicity, so additional research into the long-term, heavy use of mobile phones needs to be conducted.[2] According to R.V. Hosur, senior professor, Chemical Science, Tata Institute of Fundamental Research, Ionising radiation causes damages to the molecules they break the chemical bonds and can cause health hazards. But non-ionising radiation from mobile tower and antenna do not cause the breakage of bonds and do not cause damage to the molecules. A number of research and studies have been conducted around the globe to ascertain if there is any relationship between the radiation emission from the mobile phone and cancer. However, there is not enough evidence proving mobile phones cause cancer in humans.

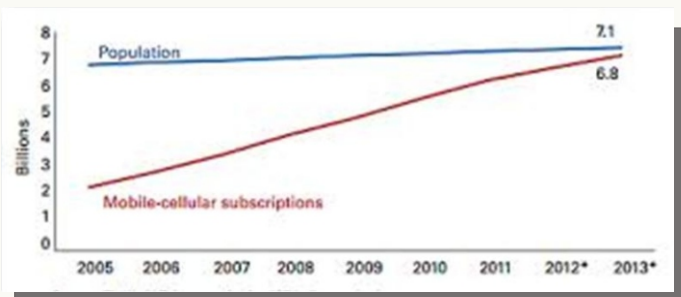
How Mobile Phone Communicate with Radio Station: The way mobile phones and base stations transmit their radio waves is similar to the operation of a loudspeaker. While the loudspeaker transforms electric current into sound waves, mobile phones and base stations send out electromagnetic fields as radio waves.

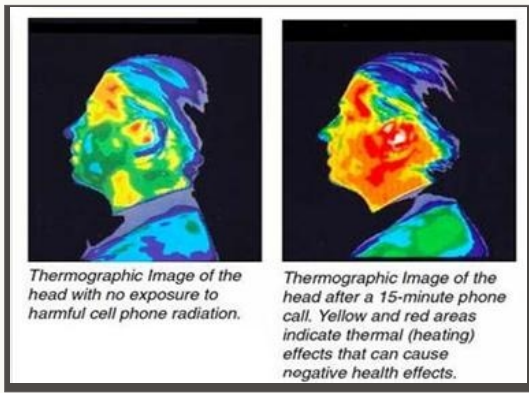
When you make a call, your phone uses radiofrequency (RF) radiation via its antenna to 'talk' to a nearby base station. Once the base station has received your signal, your call is directed through the landline phone system. Mobile phone base stations emit relatively constant levels of RF radiation. The handsets emit levels of RF radiation that vary depending on three things:

- *How long you use phone*
- *How close you hold the phone to your body*
- *How close you are to the base station. If the link to the base station is weak, the handset increases its radiation level to compensate.*

Mobile Phone Radiations: Radiation is a combination of magnetic energy and electrical that travels through space at the speed of light. It is also referred to as EMR (Electromagnetic Radiation). These radiations are broadly classified into two groups:

1. **Ionising radiation (IR):** which is capable of causing changes in atoms or molecules in the body that can result in tissue damage such as cancer? Examples of IR include x-rays and gamma rays.
2. **Non-ionising radiation (NIR):** which doesn't cause these changes, but can prompt molecules to vibrate? This can lead to rises in temperature, as well as other effects. Examples of NIR include ultraviolet radiation in sunlight, visible light, light bulbs, infrared radiation, microwave energy and radiofrequency energy.





Effects of Mobile phone radiations on Men: In a comprehensive review of the published scientific literature, the Environmental Working Group found 10 human studies that have identified a startling variety of changes in sperm exposed to cell phone radiation. In the most striking findings, men who carried their phones in a pocket or on the belt were more likely to have lower sperm counts and/or more inactive or less mobile sperm. These findings accord with similar results in laboratory animals. Many men who talk on a cell phone using a Bluetooth device or other headset keep the phone in a pants pocket or clipped to a holster. This exposes their reproductive organs to cell phone radiation, and several studies have found lower sperm count and/or poorer sperm quality in men who use their phones this way than in those who do not.

Scientists have yet to identify a mechanism by which cell phone use might cause such effects (Makker 2009). However, the research appears to rule out the possibility that the changes are caused by simple heating, which is considered to be a possible source of some radiofrequency radiation-related health problems (De Luliis 2009; Volkow 2011). It has been found among different findings that :

- * Men who carried a phone in a hip pocket or on the belt had 11 percent fewer mobile sperm than men who kept a phone elsewhere on the body (Kilgallon 2005).
- * Men who carried a cell phone on the belt and used it intensively during a five-day test period had a 19 percent drop in highly motile sperm from their previous levels (Davoudi 2002).

- * Men who talked on the phone for more than an hour a day had 17 percent fewer highly motile sperm than men who talked less than 15 minutes a day (Fejes 2005).
- * Laboratory studies on the effects of cell phone radiation on rats, rabbits and other animals have found similar effects on reproductive health (Kesari 2011; Mailankot 2009).
- * “These findings have clear implications for the safety of extensive mobile phone use by males of reproductive age, potentially affecting both their fertility and the health and wellbeing of their offspring” (De Luliis 2009).

Effects of Mobile phone radiations on Women: There are no published studies examining the effect of cell phone radiation on reproductive health in women. UCLA researchers reported that cell phone exposure during pregnancy and after birth was associated with behavioral problems in young children (Divan 2008; Divan 2012). This line of research is just beginning, but a recent review article emphasized that cell phone radiation might impact reproduction and development in both men and women (Merhi 2011).

How to reduce the risks: We believe prevention is better than cure. So, here are some tips to keep you safe from any possible complications due to mobile phones.

1. Limit your time on the phone. Reduce cell phone use to only the most necessary calls, and when you do use it, keep your calls short and to the point. Research has shown that a short, two-minute call can alter the natural electrical activity of the brain up to one hour.
2. Text when you can. Obviously you don't want to do this when you're driving or while performing any other activity that demands your full attention, but when a text will suffice, send one instead of dialing.

3. Consider replacing your current phone with a low-radiation phone. Whenever you make or receive a call, your phone signal travels via electromagnetic waves, and scientists don't yet know - fully - how much they will affect your health over a period of time. So for now, researchers are suggesting you replace your current model with a lower-emission phone.
4. Use a headset or speaker. Right now, there isn't enough research to determine whether using a speaker or headset, rather than your phone itself, offers better protection. But one thing is known: the electromagnetic waves emitted by your phone are absorbed most often received by the temporal lobe of your brain, during normal usage (phone to your ear), and that part of your brain handles hearing, auditory processing, formation of long-term memory, speech, and vision.
5. Don't put the phone by your body or on your waist during use. Again, it's a device that emits and transmits electromagnetic waves that are absorbed by the soft tissues in your body. One study suggested that men who wear their cell phones near their waste could see their sperm count reduced by as much as one-third.
6. Delayed use. If you're using your phone without a headset, wait for your call to connect before putting it next to your ear.
7. Avoid use in metal boxes. That may sound funny but using your phone in, say, an elevator or your car, cuts signal strength and forces the phone to use more power to connect.

REFERENCES:

- [1]<http://www.thehealthsite.com/news/radiation-from-mobile-phones-harmful-or-not/>
- [2]http://www.naturalnews.com/041765_cell_phones_emf_radiation_protection.html
- [3]http://www.betterhealth.vic.gov.au/bhcv2/bhcarticles.nsf/pages/Mobile_phones_and_yourhealth
- [4]<http://www.ewg.org/cell-phone-radiation-damages-sperm-studies-find>
- [5]<http://www.safespaceprotection.com/electrostress-from-cellphones.asp>

Call for Articles

At Chitkara University, the endeavor has been to hone the skills of the learners. Keeping in line with this tradition, an e-magazine titled **Wall For All** was proposed. The students as well as faculty members are encouraged to contribute articles of interest for the magazine. The articles must be original in nature, and if adapted, due credit must be extended towards that source. The students may forward the articles through their respective advisors, while the teachers may send the same directly to the editors of **Wall For All**.



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