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# Security & Happiness by Design for Happiness Initiated Behavioural Lead Intelligence Security System (HIBLISS)

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## Opinion

The world has seen places with increasing crimes, unprovoked attacks, troubled hotspots, violent protests etc. Yet as more and more security initiatives and new solutions based on artificial intelligence (AI) being implemented to mitigate security risk, there has not been significant corresponding reduction of such security incidents despite the effort. Furthermore, the pervasive used of Data Analytics and AI Technologies has also made people concerned about their privacy. The question is whether we are looking at the problem the right way? Or have we been missing something and whether we should begin to look at the age-old problem from a totally fresh and new perspective. In this paper, we will be proposing Security & Happiness by Design, a new paradigm shift for security systems that is based on research findings in Psychology (Figure 1).

### HIBLISS

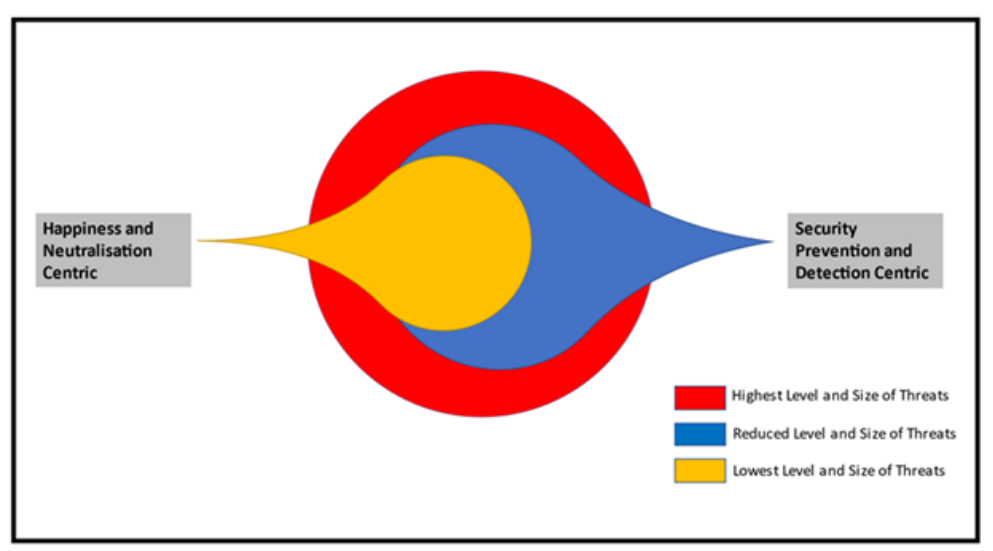


**Figure 1:** Security & Happiness by Design in Security System with Happiness Factors interwoven into Security Functions in design of the security and emergency systems.

By applying the new Security & Happiness by Design paradigm, a Happiness Initiated Behavioural Lead Intelligence Security Systems (HIBLISS) will be generated. HIBLISS shifts the traditional paradigm from a preventive and resistance position for security mitigation to one that is creating enduring happiness and resilience position in order to neutralize, harmonize and disperse the likelihood of security incidents. The security systems developed by our proposed paradigm will make individual feel safe, peace and calm in any environment without any motivation to conduct or feel any aggression and curb the intention to act with desire to harm others. This would be difficult in the past but with the advancement of 4th Industrial Revolution technologies such as 5G, Data Analytics, Artificial Intelligence, Robotics, and many of these technologies could be harnessed to bring about this revolution through use of Behavioural Lead Intelligence.

Information is power and when applied with a context, it can form intelligence. The intelligence will be derived from the vast data collected passively from the various means to perform the derivative of the intelligence through the analysis of behaviour. Hence forming the concept of Happiness Initiated Behavioural Lead Intelligence.

There have been many studies and real-life examples proving the level of security incidents is inversely proportional to the level of happiness and environmental pleasantness in the area. For example, with a very nice ambient, pleasing colours, brightness of lights could stimulate the effect to induce sense of peace, calm and tranquility which would then reduce the likelihood of negative aggression and undesirable feeling. This would further reduce the desire to commit crime or trigger skirmishes, quarrels or even fights. There were many studies that by proving a small shift in happiness or pleasantness in an environment would significantly bring about a lowering of the crime rate towards a downward trend. One such example was the broken windows theory. A 1996 criminology and urban sociology book [1] was based on this same argument. While the theory has been applied in relation to crime and strategies to contain or eliminate crime from urban neighborhoods, we thought that it also provided a theoretical background to support the Security & Happiness by Design in future security systems. The promising results in preventing vandalism in New York City, suggested that the human factors and behaviours should be the key factors in designing the security systems.

Hence instead of designing security from using intimidating physical infrastructures; reinforced structures; offensive optical perspectives like deploying armed security forces; pervasive installation of surveillance cameras etc, which will inevitably increase the tension and stress of the surrounding, we should consider alternatives to create the reverse effect to bring about positive psychology to the people in the environment. Instead having the infrastructure be designed and built in such a way that it looked like prison or military installation, the design must be pleasing and nice but with clever compartmentalization to ensure swift containment and isolation when needed. Instead of fierce looking armed security force patrols as deterrence, we should consider ways not to intimidate people and yet should still have the same deterrence effect if need be. So, the real question is how we can balance these without compromising the ability to detect, response and mitigate these threats. The Behavioural Lead Intelligence will be generated from the trinity of three domains., Connect, Sense and Response as illustrated in (Figure 2).

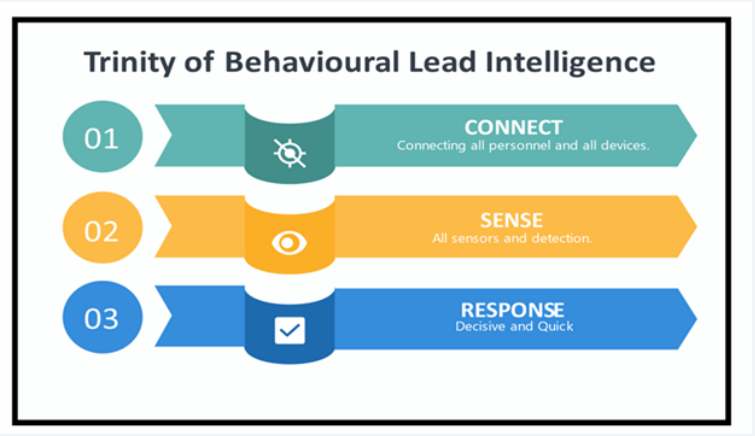


**Figure 2:** CONNECT-SENSE-RESPONSE, the Behavioural Lead Intelligence can be generated by this trinity to build the holistic security system.

## CONNECT

The first thing is to be able to provide any individual a comprehensive way to connect to the environment and to the person's friends and families seamlessly without any difficulties. He or she should be able to get whatever information he or she needs to navigate the way around. At the backend, the information can also be translated to security intelligence. For example, if the


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person connects with his families and friends all from the same locations or flights, then the security alert level can be lower than if one individual connecting to different individuals from different flights or airlines or from different nationalities. We must have the environment where the individual has all the information needed for his or her personal used. The platform and the information must be easily accessible so that they will not feel frustrated. At the infrastructure level, there must be connectivity for all devices and all information must be collected to establish norms and trends. When something changes and trigger anomalies, the backend monitoring will be alerted. This is the principle of CONNECT.

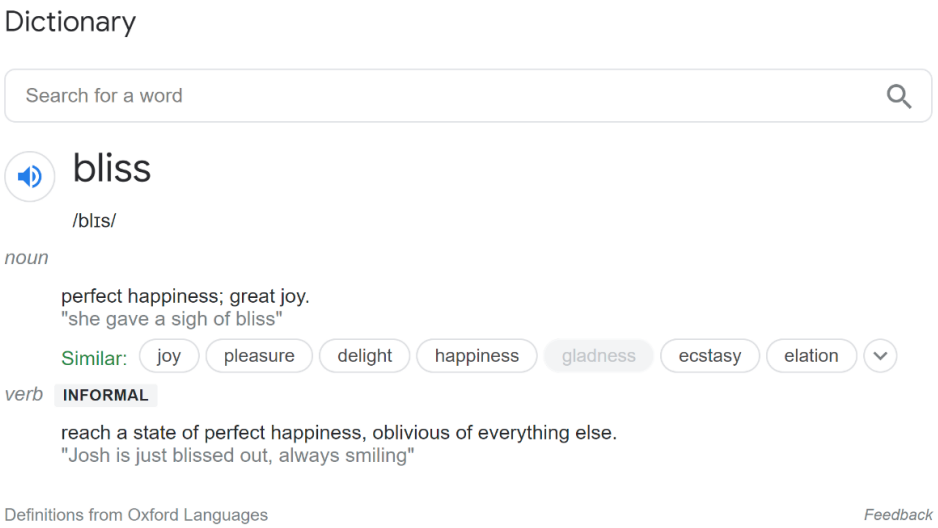
## SENSE

With the vast data and information collected from the various devices and sensors, the next domain would be SENSE. With pervasive sensors backed by Data, Video Analytic with Artificial Intelligence, we should be able to 'sense' a potential trouble or potential threat even before it starts. We could also sense if someone looked lost, emotionally distraught or stressed. All these sensing can be done remotely using our system. The sensors deployment can be pervasive and yet not intrusive. The presence can be felt but not intimidating. They only became optically obvious when needed. With the ability to sense everything and many things, we will be empowered to steer people to be comfortable and go about their tasks in a serene manner. The 'Happiness' level can also be monitored periodically by the video analytics to capture the emotion of the faces. Yet the same system could pick up abnormal behaviour, unnatural and aggressive gestures, strange movement of things and human being. Help or security intervention can be dispatched very quickly without raising too much attention because these triggers can be made available quickly and accurately to mitigate security issues and risks. In this domain of Sense, there could also be opportunities to implement sights, acoustic and olfactory technologies to use the senses of visual, sound and smell to trigger calmness and lower the aggression of individuals. Such therapeutic techniques have been proven in many studies.

## RESPONSE

This brings to the third domain, RESPONSE. With technology, outdoor and indoor geo-location, connected smart robotics, personal mobility devices etc, assistance or security force could be dispatched rapidly to intervene any potential incidents. The system can dispatch the nearest entity to aid or check on the person in duress or investigate suspects. For example, an individual may be in distress, he may drop things, he could not seem to find his way or even he is walking back and forth aimlessly etc, once any of this behaviour is detected by the system, the response in the form of assistance either physically or with the use of robots, could immediately be dispatched to help this person. If there is potential argument or conflict between two persons exhibiting aggressive behaviour, the security person on Personal Mobility Device, could be dispatched immediately to politely intervene.

Besides physical response, there will also be a need to develop a People, Processes and Procedures Response Framework (PPPRF) to train all staff operating in the premise to be security sensitive to spot, response and mitigate potential risks. At the system level, there will be AI initiated prediction taking in the vast data from the premise like airport etc. Take the example of airport, we could gather the number of flights per day, the manifest and number of passengers on board, how they would move within the airport, identify any potential congestion at the luggage belts, duration they will stay in the airport etc. Through this big data analytic powered by AI, the airport operation can remain efficient and effective to lower tension and stress for travellers. With CONNECT-SENSE-RESPONSE, the Behavioural Lead Intelligence can be generated by this trinity to build the holistic Security System. Hence the birth of Happiness Initiated Behavioural Lead Intelligence Security System or HIBLISS. (Pronounced as High Bliss).





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With HIBLISS, there will be a balance between both Security by Design to mitigate risk when it happens and Happiness by Design to push the reduction and suppression of security risk in the reverse direction to neutralize and normalize the behaviour and reduce the likelihood of potential security risk. The combined Security and HIBLISS could bring about harmony, peace and tranquillity which will drastically reduce the chances of hostility and criminal activities. Inconclusion, HIBLISS will revolutionize the way we design security systems and changes the threats and security landscape for future cities.

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