

A Transdisciplinary Approach to Strategic Profiling.

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Abstract:

September 11th taught the intelligence community about the futility of narrow mindedness as well as patch protection. Lessons were also learned about the different and sometimes unusual data or tools, where both traditional but also nontraditional sources proved useful. As much as we had to rethink our stereotypes about whom we target and how we do things, we also need to rethink on the tools that we do things with. Different disciplines of learning & knowledge themselves are often just as hide bound and inflexible as parts of the intelligence community have been.

Profiling is not an exception to the rule, nor is it practiced in a single domain. You can find the principles and practices of profiling in the marketing world, in fictional characterization, in terrorist analysis, in various criminal fields, in statistical practices as well as data analytics.

This paper describes various types of profiling, discusses their different applications, and explores their commonalities, which can be extracted and applied to both tactical and strategic applications. The paper also demonstrates different data management techniques that allow the integration of both qualitative and quantitative data, the results of which can be integrated using data analytics and knowledge management.

Introduction

I need to open my paper by making it clear that the views expressed here are my own, and do not represent the Australian Tax Office. Profiling can be a very useful tool which tends to be disciplined based, however, disciplinary focused activities may limit its effectiveness. Transdisciplinism is about finding common links between different disciplinary activities, which then strengthen the original discipline practices.

Transdisciplinism

Any transdisciplinary approach can be openly confronting because disciplines tend to keep to themselves, and get defensive at the thought of using or even considering integrating another disciplinary practises. This is a natural response to any transdisciplinary approach. I do not wish to degrade, trivialise, or marginalize any discipline, but instead focus on the commonalities and methods of integration. I ask you to please put aside any territorial feelings and explore with me what other disciplinary approaches can enhance your own profiling activities.

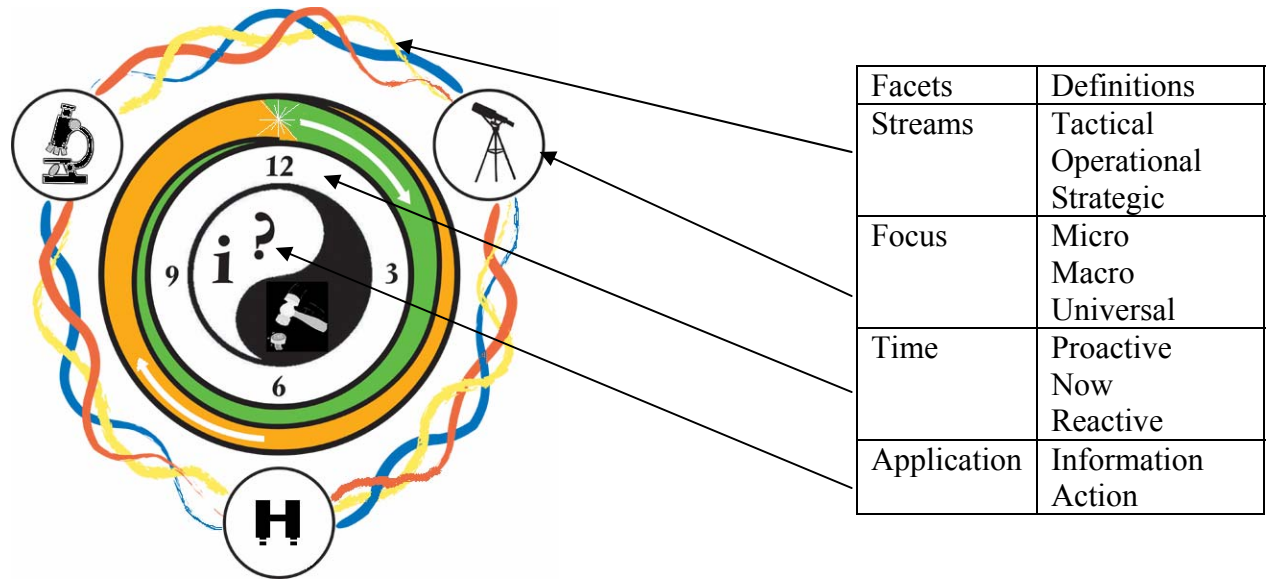
Intelligence

To begin with, I would like to lay down some groundwork with a situational approach to the three areas of intelligence. I intend to take these definitions back to basics and give a primary focus to what they mean. For now, I would like to use the following definitions as the basic definitions that all other definitions stem from.

Intelligence areas	Focus
Tactical	specific information and characteristics
Operational	generic information, patterns, trends, and contributing factors
Strategic	lateral / universal information and interconnections

By situational I mean using Einstein's theory of general relativity and applying it to data, information, and knowledge. Basically, each brick of information resides within its own bounded rationality, where it derives its meaning from the space and time of its consideration. Thus, any piece of data, information, knowledge, or intelligence is interpreted by the space, time, and subject at that moment, and its meaning & importance can be reinforced, altered, changed, or even disregarded at any time. Information science studies research has demonstrated that information has a dynamic symbiotic existence with its environment, and it is always in a flux of rebalancing with any change in the sense making process.

In a dynamic view of intelligence work and profiling, there are four facets for consideration. Each one of these facets helps to define the environment that the investigation and the profiling takes place. The intelligence environment is also dynamic. For example, at any point in the investigation process the skills, methodologies, and practices of each of the Stream (Tactical, Operational, and Strategic) are used. However, at different times the importance and the priority of these streams may change due to the tasks being undertaken.



In the model above, all of the elements are in a balanced and dynamic pattern of interaction and cross feeding to each other section of the model. I realize it looks complex, but so is the area of intelligence. However it is important to take the time out to understand the dynamic intelligence model, to truly understand where profiling fits into the picture and the forces involved that can affect the efficiency of profiling. Even within a single discipline, profiling is not limited to just one level of complexity nor limited to just one type of investigation. The profiling methodology is just as likely to change, as the piece of information is that is being classified into the profile.

Even though the Focus facet is very similar to the stream facet, they are different, but no less important. One single piece of information in one setting may be a micro view within a strategic stream viewpoint, yet the same piece of information may contribute a macro viewpoint to a tactical or operational stream. So, the one piece of information can contribute in different ways at different levels of focus and intelligence practice.

Time is also a major contributor, because of the reason a person is profiling. Is the main driver a proactive reason to stop and event happening. Is the main driver to solve a problem right here and now? Has there already been an event happen, and the main driver is to stop a repeat event, or to catch the person or persons that caused the event?

Finally, what is the application of the intelligence work? Is the current activity to research and locate contributing information to build up an intelligence report or is the process to develop an intelligence plan to perform some type of action.

When you consider all the impacts on intelligence work, then consider just where you are using profiling as a tool in your intelligence based work. How does the dynamic environment impact on the effectiveness of your profiling, and just how robust or sensitive are the profiles you create to changes in the environment or knowledge used to create your profile in the first place?

Profiling

Now, I would like to take profiling back to basics too. Profiling has been said to be the art of making profiles. Now we all know that profiling is more than this, but first of all let's look at what a profile is. A profile is a list of key characteristics that help group 'like items or attributes' together by a set of common characteristics. These characteristics can be primary data such as height, weight, volume, size, colour, etc. Some definitions of profiling are:

Lyndon B. Johnson School of Public Affairs - University of Texas

A technique whereby a set of characteristics of a particular class of person is inferred from past experience, and data-holdings are then searched for individuals with a close fit to that set of characteristics.

www.utexas.edu/lbj/21cp/ebt/glossary.htm

Warrick Business School UK

The task of building up a fuller picture of the target segments.

http://users.wbs.warwick.ac.uk/dibb_simkin/student/glossary/ch07.html

McGraw Hill Online Learning Center Information Technology and Management

The use of behavioral indicators such as a record of the websites accessed to create a profile (set of characteristics) of an individual.

highered.mcgraw-hill.com/sites/0072315326/student_view0/chapter5/glossary.html

The Cognitive Science Laboratory at Princeton University

Recording a person's behavior and analyzing psychological characteristics in order to predict or assess their ability in a certain sphere or to identify a particular group of people

www.cogsci.princeton.edu/cgi-bin/webwn

Center for the Health Professions The University of California, San Francisco

Systematic method of collecting, collating, and analyzing patient data to develop provider-specific information about medical practice.

Genetic fingerprinting or DNA testing is a technique to distinguish between individuals of the same species using only samples of their DNA Its invention by Sir Alec Jeffreys Sir Alec J. Jeffreys, FRS

<http://encyclopedia.thefreedictionary.com/DNA%20profiling>

Investigative Process Management's Consultancy Services

Psycho-Geographical Profiling is concerned with the spatial analysis and psychological behavioral patterns of criminals. The technique employs a variety of methods, including distance to crime research, demographical analysis, environmental psychology, landscape analysis, geographical information systems, point pattern analysis, crime site residual analysis, and psychological criminal profiling.

<http://www.investigativepsych.com/geoprofile.htm>

"Deductive Criminal Profiling: Comparing Applied Methodologies between Inductive and Deductive Criminal Profiling Techniques"

"The process of interpreting forensic evidence, including such inputs as crime scene photographs, autopsy reports, autopsy photographs, and a thorough study of individual offender victimology, to accurately reconstruct specific offender crime scene behavior patterns, and from those specific, individual patterns of behavior, deduce offender characteristics, demographics, emotions, and motivations."

The uses and the techniques of profiling are many and varied. Indeed the basics of profiling have been used in some form or another for over 1000 years in the west, and over 2000 years in the east, perhaps even longer than that. Today there are many types of profiling; here is a list of some of them:

- Environmental:** Locating the common attributes between environments.
- Knowledge:** Identify the common attributes of knowledge in decision making.
- Data:** The common data fields that different databases contain.
- Criminal:** The characteristics of criminals to the crime they commit.
- Fictional:** Profiles of fictional characters to be used in a book, film or play.
- Economic:** The Economic capacity and development of a country or business.
- Marketing:** Locating different market segments
- Country:** Grouping common features of countries for economic and military purposes.
- Patient:** Medical profiles of patients to develop and apply treatments.
- Behavioural:** To ascertain the different behaviors of people.
- Digital:** To map the different behaviors of people on the Internet.
- Psychographic:** The reason for a persons behavior.
- DNA:** Distinguish the difference between people through their DNA.

Profiling for Intelligence Purposes

In the intelligence community, there are three main purposes of profiling. In the intelligence community, profiling is really about drawing together characteristics of people and locations to prevent the occurrence of an event or to stop an unwanted event, or to catch persons who have caused an event. By event, I mean something that will influence an individual or group, to cause a change for either positive or negative results.

Of course, with political motivations, there are generally at least two sides, and both sides will conduct profiling to either cause or prevent an event taking place. Profiling is a tool that can be used by all sides of any conflict, to try and reach a desired results. People also have to watch for counter-intelligence and counter-profiling activities, which are planted to purposely mislead or to guide the profiler to make false assumptions.

Purpose	Description
Event prevention	Stopping events before events happen Terrorism attacks, Murders, Rapes, Thefts
Event control	Controlling events for public safety Protest Marches, Community Meetings, Sporting, Transport, etc...
Catch criminals	Catching persons who commit events

Another question for the profiler is how much material do you need to be able to establish a profile and when is enough actually enough. For some profilers 'like me', there is never enough material, and I want to know it all. Of course, this is practical but that still does not stop me wanting to know. I believe there are four questions about the levels of material needed for profiling.

Minimum – What is the minimum amount of material I need to construct a profile?

Maximum – What is the maximum amount of material available I need to make a profile?

Desired – What is the desired amount of material I need to feel comfortable with a profile I produce?

Practical – How much material is it practical for me to gather within the required time frame?

Psycho-Geographical Profiling

Current research is establishing a casual relationship between certain types of events and the environment that those events happen in. For instance, certain types of crime like graffiti, rape, break and enter, etc tend to happen in environments where the offender thinks and feels there is less likelihood of disturbance, interference and capture of their activities. In the Business world, the same can be said for shoppers. Retailers and advertisers profile their target segment of the general population to use and alter signage, colour, music, temperature, and location to influence choice in the decision-makers decision. Even in supermarkets, the location of goods on the shelf is predetermined not by size of product, but by prime visual frontage and easy access to products. Some supermarket chains actually charge manufactures a premium fee to have their goods at a certain height and certain position relative to the section and the checkouts.

Below is a safety Audit developed at the North Shore Local Area Command of the NSW Police service, by Sgt Bob Dunger and myself. It is a survey designed to understand a persons perspective of a location within the area, and to then map crime types and frequency for that area. There are ten categories, and for each category there are four quantitative and one qualitative part. Respondents are requested to express how safe they feel and also how safe they expect to feel in the location in day time and night time, and to explain the reasons for their answer.

This then allows for a psychological and geographical / environmental profile to be developed, where all locations can be indexed on safety aspects, as well as individual characters across an area. So where Light is the focus issue, all areas can be rated on the amount of perceived light in an area, as well as effect of light impact on an area between day and night time. The intention was to examine for patterns of crime due to environmental and geographic factors as well as predict most likely next possible target locations, when the criminals decided to move on.

Location _____ Map Ref. ___ Location: New / Old Date _____ Size _____
 Number _____ Street _____ Suburb _____ Who _____

Describing the Location	Day		Night	
	E	F	E	F
Score every box both E = Expectations – F = Findings with 1 (Very Unsafe), 2 (Unsafe), 3 Neither, 4 (Safe), 5 (Very Safe)				
Personal Safety – Please consider how safe you feel in this area.				
Why ?				
Noise – Is the noise over bearing or would you be heard if you cried for help?				
Why ?				
Lighting – Is there enough light to see 25 meters, is the light evenly spread?				
Why ?				
Visibility – Can you see where you are going? Is your line of sight obstructed? Are there places to hide?				
Why ?				
Signage – Street signs, direction signs, emergency signs. Are they in good condition, poor condition? Large enough for disabled people to read ?				
Why ?				
Access, Traffic & Transport – Different access points, vehicle traffic, stairs, escalators, tunnels, foot paths, blockages.				
Why ?				
Provision of Services – Pay phones, internal phones, toilets, rubbish bins, seating, drinking fountains and fire extinguishers.				
Why ?				
General Maintenance – Any signs of damage, litter, graffiti, vandalism, pathways, fences, pain work, landscaping, or over grown areas?				
Why ?				
Other persons – Is the area well populated, and frequently used? Are there people you can approach for help? Would people stay away from the area because of criminal activity?				
Why ?				
Security – Does the area seem well secure by security devices e.g., window bars, alarms, video cameras?				
Why ?				

Notes:

Industry Profiling

The private sector especially in the business world is fast developing a series of tools and expertise for creating and refining profiles for their business operations. These tools are used in marketing, employment, production, and logistical applications to increase the effectiveness of their bottom line. This practice is not limited to only the private sector, various segments of the public sector are also adopting profiling in the same way as the private sector has. An example is the Australian Tax Office (ATO). The ATO uses as part of their compliance model the following categories (Business, Industry, Sociological, Economic, and Psychological) as part of their Compliance Model. (<http://www.ato.gov.au/print.asp?doc=/content/35508.htm>). However this set of classifications can be too broad and lacks functionality. If the BISEP model is integrated with an marketing segmentation model from Marketing in Australia 2nd ed. By (Kotler, Chandler, Gibbs, McColl) 1989.

Geographic – Regional, city or local government area, density, climate

Demographic – age, sex, family size, family life cycle, income, occupation, education, religion, race, nationality

Psychographic – Social class, lifestyle, personality

Behavioristic – Purchase occasion, benefits sought user status, user rate, loyalty status, readiness status, product attitude.

Therefore, an integrated profile may look like this:

Geographic	Business	Industry	Sociological	Economic	Psychological
Regional					
City - LGA					
Climate					
Inland / Sea shore					

Demographic	Business	Industry	Sociological	Economic	Psychological
Age					
Sex					
Gender					
Income					
Education					
Occupation					
Nationality					

By the integration of market segmentation profile into the industry profile, a more detailed and encumbering tool emerges, which contributes a better quality and volume of data. This can be matched with other data sources like statistical, industry indexes, marketing databases, banking and finance information sources, as well as geographic reference material.

Fictional Character Profiling

As we learnt from the Sept. 11th attacks, much of the scenarios and results of such attacks came from fiction, especially works from Tom Clancy like Debt of Honor and Executive Orders. This prompted the USA government to review and utilize fiction from sources such as books, films and television programs, etc. They also approached scriptwriters and book authors to provide regular inputs into future possibilities attacks.

Authors and scriptwriters really need to have a very full profile of their characters and there environments to write a book or script. They have to know them so well, as to make them seem very real to the reader or viewer. Bellow is an example of some character profiles categories and elements.

These are an integration from:

Fiction Writer's Character Chart: <http://www.eclectics.com/articles/character.html>

Schaum's quick guide to Writing Great Short Stories: Margaret Lucke, McGraw-Hill, 1999.

Word Painting: A guide to writing more descriptively. Rebecca McMlanahan, Writers Digest, 1999.

Character Profile

Date this chart was completed:

Character's Full Name, Reason or Meaning of Name, Nickname, Reason for Nickname, Birth Date

Physical Profile:

Physical Age, Mental Age, Appearance Age, Eye Colour, Glasses, Shape, Contacts, Weight, Height, Build, Skin Type, Skin Colour, Face Shape, Hair Colour Natural Dyed, Hair Length, Type of Hair, Overall Appearance, Physical Disabilities, Mental Disabilities, General Health, Medical Conditions, Predominant Features

Favorites/ Least Favorites:

Colour, Music, Author, Art, Plays Books, Restraints, Food, Transport, Clothes

Habits:

Tobacco, Alcohol, Sex, Cleaning, Hobbies, Sports

Background:

Born, Type of Childhood, First Memory, Education, Religion, Finances

Family Details / Relationships:

Mother, Father, Brothers, Sisters, Children of Siblings, Extended Family

Other broad headings include:

Attitude, Personality, Traits, Self-perception, Interrelation with Others, Goals, Problems/Crisis's, General, Uncategorized, etc

Of course, there are many other sources of fictional character reference materials. These profiles can also be integrated with real persons' profiles such as dating services like RSVP, Just Good Friends, and Lava Life. Another source of material that can contribute to developing a checklist of profiling characteristics to use is the psychometric tests like IQ, Emotional Intelligence, Myers Briggs, Strength Deployment Inventory, and other types of personality tests. These also include good listings of the characteristics for developing a wish list for profiles to describe suspects, etc.

Knowledge Profiling

When you look back over time, the earliest and most extensive attempt to profile anything is the classification and profiling of knowledge. Libraries have been developing classifications and have been profiling pieces of information in its many forms for a long time.

Artificial Intelligence, Artificial Life, and Cogknology are all areas of investigation and application, which use profiles to gain a better understanding of how knowledge is used in decision-making and how decision-making can be enhanced, copied, and or controlled in both humans and machines. The Centre for Autonomous Control at the University of New Mexico is a NASA research facility, which is looking at the integration of knowledge profiling, and geographic profiling can be achieved by robots exploring other environments both on earth, on other planets and in space.

Cogknology is about looking at the interaction between cognition and knowledge to better gain an understanding of what contributes to decision making. With all decision-making, knowledge, emotions and opportunity all contribute to the sense making processes which when combined with our needs drives our human behaviors. However, as I have already explained earlier on, a piece of knowledge can mean many things to many people, and that knowledge changes over time in relation to its environment. This is also complicated that Knowledge is subjective to the observer, not in its existence but in its interpretation. That the interpretation is based on the sum of the observers experiences, memory, emotional state and cognitive ability.

For a quick example, look at what was known over time, like the earth was the center of the universe, the world was flat, there are only four elements form which the entire world is made up etc. All areas of knowledge, which have changed because of better understanding.

Bellow is a table of the Cogknological knowledge profiling classifications. Different pieces of knowledge are profiled at a specific time in reference to a specific topic, and then the same piece of knowledge is profiled against a different time and topic, to examine the changes of the same piece of information within a changed environment.

Recent vs Historic	1	Age of the Information	time
Need - Immediate vs Deferred	2	Time of Usage of Information	time
Snap vs Incubation	3	Speed of Analysis	time
Objective vs Subjective	4	Source of Knowledge	Know
Simple vs Complex	5	Structure of Knowledge	Know
Conventional vs Radical	6	Political Focus of Knowledge	Know
Fictional vs Truth	7	Reliability of Knowledge	Know
Abstract vs Concrete	8	Application of Knowledge	Know
Theory vs Practical	9	Application of Knowledge	Know
Fun vs Serious	10	Application of Knowledge	Know
Macro vs Micro	11	Focus of Knowledge	Know
Faith vs Experience	12	Belief in Knowledge	Know
Primary vs Secndry	13	Source of Knowledge	Know
Tacit vs Explicit	14	Application of Knowledge	Know
Informal vs Formal	15	Source of Knowledge	Know
Systematic vs Chaotic	16	Structure of Knowledge	Know
Private vs Public	17	Source of Knowledge	Know
Serious vs Pleasure	18	Application of Knowledge	Know

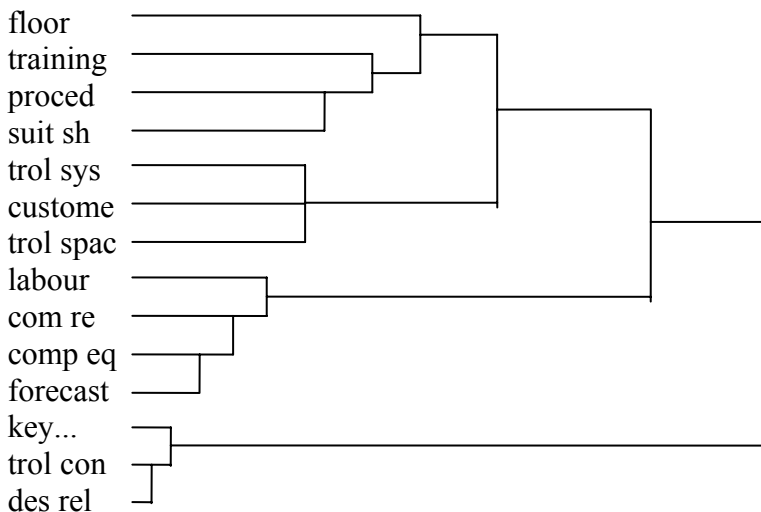
Decision Intelligence Profiling

Decision Intelligence is the application of value added information (intelligence) to cognitive processes (decision-making). Decision Intelligence Profiling is an interactive approach to profiling, which uses problem solving and statistical techniques. By listing and comparing the various elements within an interaction matrix, it is possible to establish the degree of influence and interrelatedness of what is perceived to be the characteristics of the profiling study. It also needs to be pointed out that this is a subjective activity that is based on human evaluation, and also that these observations are situational bounded by time, age, sex, gender, income, location, culture, etc.

By using observational, intelligence and statistical information, and by converting this information into mathematical variables, it is possible to cluster these variables and produce pictorial representations describing the degree to which the variables interrelate. This allows patterns of behavior or features of items to be mapped and compared with each other, thereby identifying patterns, which can assist with comparisons or risk assessment predictions. Although this is an intensive process, it does give deeper insights into complex scenarios.

The statistical modeling system is a 'Fuzzy Logic Granulated Finite Model', which uses both arithmetic and geometric mathematical scales and statistical techniques. This results in a matrix, which is designed to be fluid and allows for the different characteristics to be flexible and interactive with other characteristics of the profile. By using this technique it is possible to review any part of the matrix and either incorporate a 'what if' question, or to compare different matrixes together. It is also possible to have the various data and sources being a single observation or multiple observations. The philosophy behind the matrix, is that providing that 100% of the characteristics are described, then 100% dendrograms will result, which is highly unlikely, due to the subjectivity of the observations, and the many number of variables that may be involved. The matrix is designed to be 100%, and the mathematics is designed that way, so the matrix is only going to be as good as the data input. However, once the data has been collected and entered, the mathematics then clusters the characteristics together according to their similarity and then by their degree of influence.

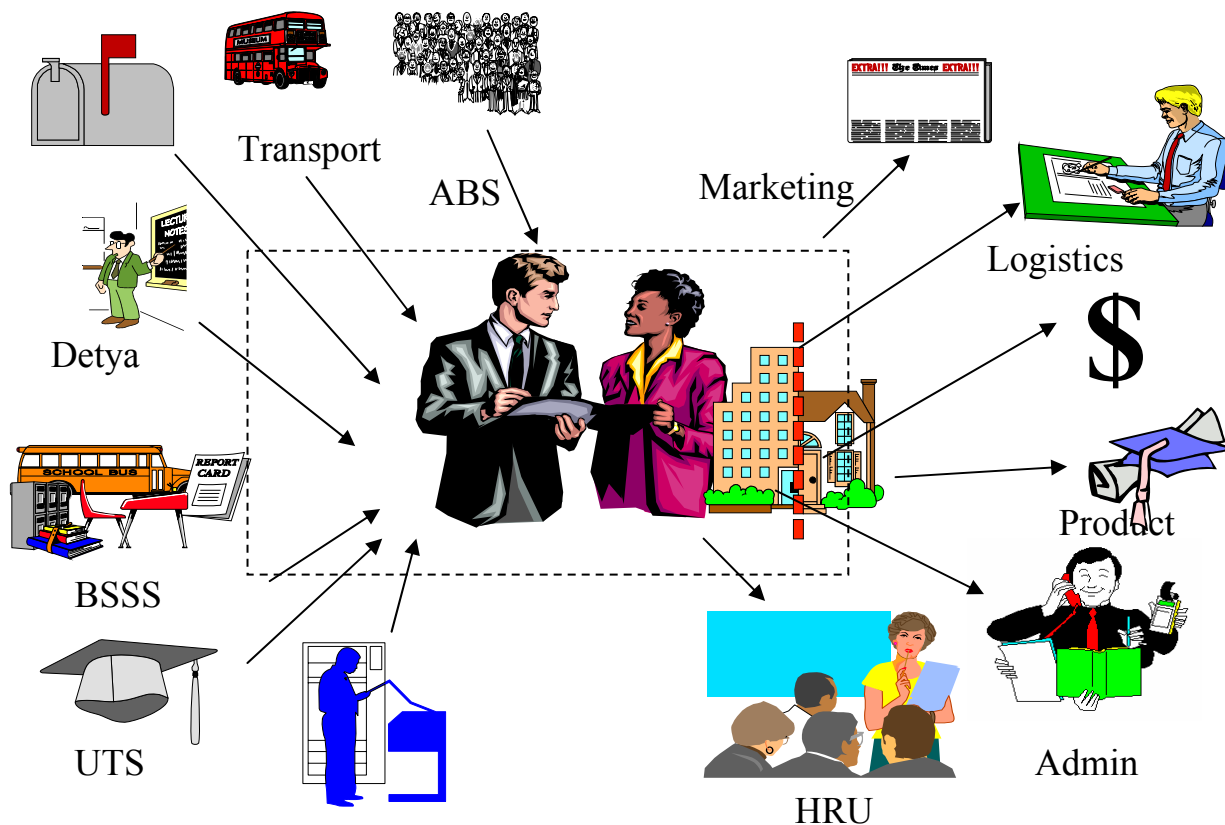
Below is a decision intelligence profile of a student usage issue of the logistical requirements of the through put system of the library. This is a visual representation of the thinking profile of library users on the importance of each characteristic of the problem at hand, and a ranking of the elements within the profile in order of importance and contribution to the decision at hand.



Student profiling

Under current commercial programs for sales models and data mining, they are based in the majority of market perceptions, of infinite possibilities. Many also fail to take into account the mixed throughput and cycles of having such a wide range of product and service choice. A student academic community profile for a university year can be made up of many students from different funding groups, different progression and pass rates, different study modes, and at different stages of their studies. It really is a giant mixing bowl of ingredients, from which we have to make the perfect set of pies for the funding model, etc. There is however a different approach to this problem, which in effect changes the rules by attacking the data from a different methodology. By the recognition of the need for a finite model, and by exploring the possibilities of finite modelling, and using fuzzy logic principles to map movements and sensitivities to logistical changes, it becomes possible to have a series of different types of analysis to give a better picture of the complexities of student profiling. The follow is a mini example taken from a cohort profiling activity undertaken as a pilot study at the Faculty of business, UTS.

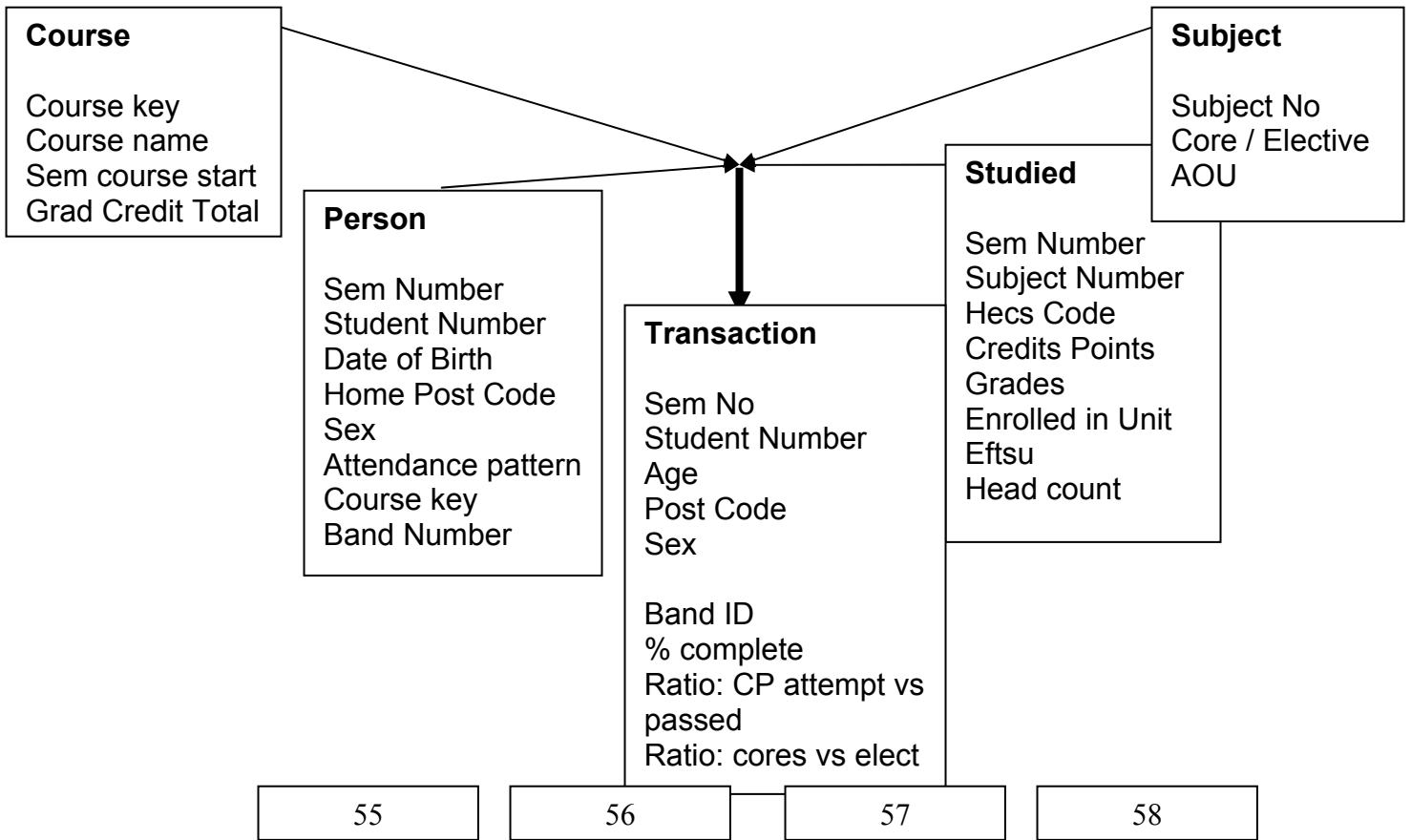
By creating a Cohort model, through a series of new student labels, and a purpose designed series of filters and chronological reference points, it is possible to profile the study and progression pattens of students, and to be able to assess the diversity of alternatives with deviations from the assumed study program within the system. The Cohort model analysis is based on a newly developed type of mathematics and modelling technique that gives a wide range of flexibility in data modelling, not previously available.



The diagram shows where the main purpose of the project was to profile students at UTS, and where those students worked and lived. The data was gathered from DEST, Australia Post, Board of Senior School Studies, ABS, UTS, and the University Admissions Center. The benefits from this project were achieved in the Marketing, Logistical, and development of educational product, administration adjustments, and human resourcing.

Student Id	Identifies the student for data integrity
Course Code	Identifies the course, level of study and faculty
Date of Birth	Identifies the age of the student
Gender	Identifies the gender of the student
Enrolment	Identifies if the student is a commencing or re enrolling student
Date departed	Identifies the date the student finished with the university
Attendance	Identifies the part time / full time or external
Heccs Code	Identifies the funding sources and type of student
Award	Identifies if the student was granted an award
HSC / Cat B	Identifies if the student came from school or other entry scheme
Subject No	Identifies the subject being studied
AOU	Identifies the organisation unit key, which shows the school which teaches the subject
Year Studied	Identifies the year the student was enrolled in that unit
Semester Studied	Identifies the semester the student was enrolled in that unit
Subject Mark	Identifies the mark awarded to the student in a specific subject
Subject Grade	Identifies the grade awarded to the student in a specific subject
Funding Weighting	Identifies the complexity weighting of the subject
Enrolment Indicator	Identifies if the student was enrolled in a specific subject
Eftsu.	Identifies the Effective Full Time Study Unit

Data from various different databases are joined together, to form a profile of various student progressions, which includes subject choice, attendance mode, classroom location, and delivery mode. These student profiles provide a wealth of information, which was previously unavailable. The following diagram is the relational database model required to develop the profiles.

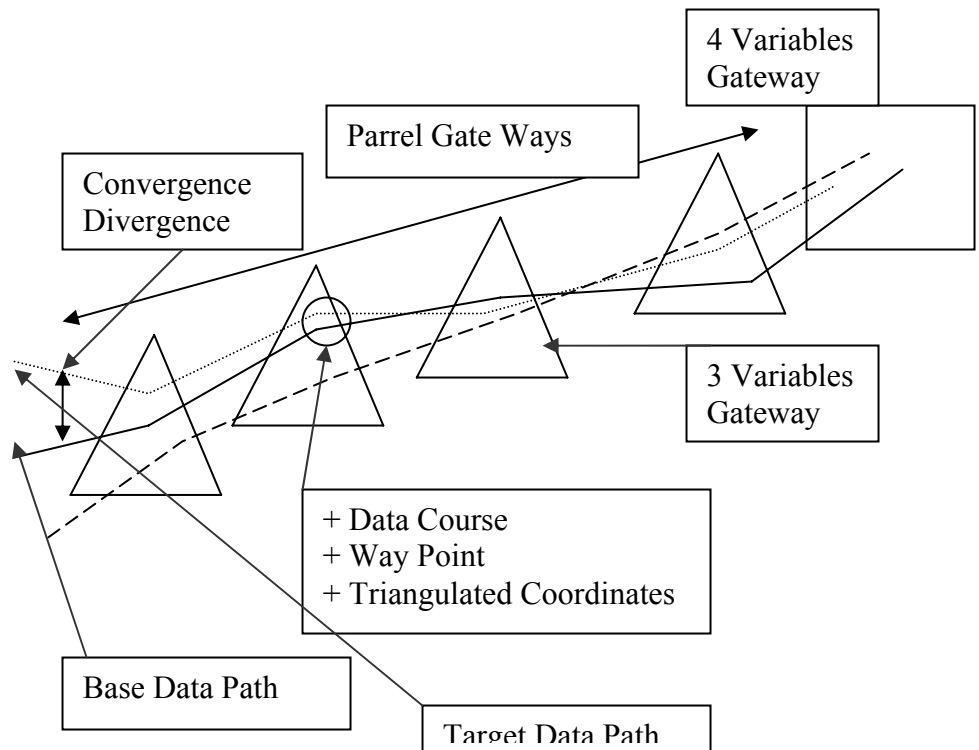


Extreme profiling

One of the limitations of using statistical techniques and integrating different sorts of data together is that traditional mathematics and statistical tests were not designed to undertake such types of analysis. The rules of mathematics and statistics are based on the physical realities of our universe, which has traditionally not included behavioral or psychographic observations. This has limited the effectiveness of certain types of profiles, due to the limitations of computer power, speed of data searching and the overall complexity of the number of integrations and interactions involved.

Hyperpanometrics is about creating an alternative reality or artificial universe. An analytical process that plots data on either a geographical or a topographical structure in an artificial universe. Then connecting the data points together in sequence to observe convergence and divergence. The word (hyper-pano-metric) breaks down into (multi – universal – measure). Hyperpanometrics is a new type of complexity analysis that uses hyper-data¹ representations inside an artificial universe² through a bounded rationality³ framework. The overall concept is to undertake a between group / within group Style of analysis to Produce trend data Through the mapping of data,

information and/or knowledge on a geometric or topological shape or framework Hence the plotting of Points allows an between group and within group type of Analysis By plotting the trajectory⁴ of Data-Paths⁵ which transverse through hyper-data waypoints⁶, parallel analysis can be performed by observing the convergence⁷ and divergence⁸ of the data paths by the change in the bearing⁹ & proximity¹⁰ from the base path¹¹ to the target path¹². Each waypoint is incased within a geometric or topographical framework, where the location is determined by the unique position whose coordinates are set by the values of the relevant variables. Since the advent of computers, people have been attempting to model various factors



of their world. The system of analysis is based on the theory that if you have a series of observations over time, then it becomes possible to compare the movements both within the hyper data points, and between the waypoints.

¹ Hyper Data – A set of observations from Nth number of variables that triangulate within a geometric or topographical framework

² Artificial Universes – A mathematically created universe, where the laws of nature are controlled and can be observed

³ Bounded rationality – Limited universe only relevant attributes which contributed to the universe

⁴ Trajectory – The path followed by an object

⁵ Data Paths – Linked way points

⁶ Waypoints – A 3D interval framework

⁷ Convergence – 2 data paths moving towards each other

⁸ Divergence – 2 tracks moving away form each other

⁹ Bearing – Direction relative to a fixed point

¹⁰ Proximity – Nearness in space and time

¹¹ Base Path – The path from which measurements are taken

¹² Target Path – The primary path of interest

Thus, it becomes possible for people to create complexity chains and Hyperpanometric type profiles to examine highly complex and great amounts of data into multi variable data processing.

In Conclusion

In conclusion, I would like to invite you to contact me if you have any questions or comments about the paper. You can contact me on t.nolan@uts.edu.au or look at my other research on www.gftd.org. I hope you have enjoyed reading the paper, and that you can see how the wonderful new ways by taking a transdisciplinary approach to profiling, can indeed help your current profiling activities. There are many different sources of profiling information available in a range of different disciplines, all you need to do is to go out and search.

If you are interested in taking these activities further, and would like to know more about Hyperpanometrics and the different ways that unusual data can be linked together to make easier pattern recognition. Then also feel free to contact me, I am especially interested in chatting about the benefits and techniques for the merging of different data types to hunt out better profiling results.

Source Material

Word Painting: A guide to writing more descriptively by Rebecca McClanahan.

Schaum's quick guide to writing great short stories by Margaret Lucke.

Marketing in Australia by Kotler – Chandler – Gibbs – McColl

The unknown darkness by Gregg O Ramsland

The writer's guide: a companion to writing for pleasure or publication by Irina Dunn

The psychology of the internet by Patricia Wallace

Scene of the crime: a writer's guide to crime-scene investigations by Anne Wingate

The Cell by John Miller, Michael Stone & Chris Mitchell

Offender Profiling: theory, research and practice edited by Janet L Jackson & Debra A Bekerian

Offender Profiling and Crime Analysis by Peter B Ainsworth

Criminal Profiling: An Introduction to Behavioral Evidence Analysis by Brent E. Turvey

Geographic Profiling by D Kim Rossmo

Hunting serial predators: a multivariate classification approach to profiling violent behaviour by M Goodwin

The evil that men do by S G Michaud & R Hazelwood

Computerised Operational Policing System by NSW Police Service.