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Chuen-Tat Kang

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This book is dedicated to my beloved God, families and friends.
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Abstract: Universities in Australia are abide to various rules and regulations that guard the administration of the varsities as educational and business institutions. Argument sometimes arises on whether the state statutory organizations could be under jurisdictions of trade practises law in various Australian states. In certain disputable situations, contractual inconsistencies in the interpretation could arises especially among the research staffs and students due to various different interpretation of rights and conditions of awards during the recruitment processes. In order to prevent breaches of contracts in any parties then the research teams, whether of law professions or otherwise, should be cautious about the rights available in every party entering into the contract. The paper has also included Swinburne University of Technology as example in the description of various potential contraventions that once happened in the varsity.

Jurisdiction under Commonwealth Australia and State of Victoria Legislation in Australian Varsities [1] - Public university in Australia is normally regulated by various laws and regulations, ranging from international [2], national [3] and state [4] regulations. Previously it was thought by public and university academic of mainly non-law professionals that Commonwealth Australia law could have no place to be applied in state statutory bodies in the universities in the state of Victoria, but this will not be the case. [5] Public universities in Australia are incorporated under the founding statute, with only a variation in the individual university body corporate and politic. [6] Such incorporation of the university will need to comply with Commonwealth Australia Uniform Corporation Act 2001. [7] For the varsity that does not establish Faculty of Law nor posses systematic legal reference for non-law faculty management, inclusive of Swinburne University of Technology Australia as described in this paper, procedural irregularities could be encountered in the PhD termination processes. [8] Funding to Australian university is provided by the federal Australian government the Department of Education, Employment and Workplace Relation (DEEWR) through federal funding legislation. [9] Breaching of student rights by some university staffs members might not be aware among student rights officers sometimes, normally internal advocate of the university, and also the external community grievance organizations. [10] University in Australia could be incorporated by statute, and can also be concurrently incorporated under the Commonwealth Uniform Corporation Act 2001 or other relevant legislation, where the availability of the university legislation could provide some form of support. [11] Whether the university was breaching Commonwealth Australia or Victorian state of Australian law based on regional categorization, public laws [12] or private law, [13] any complain commissions, tribunal and law courts could be granted authority to intervene with the university decision-making process when the error of law or abuse of power exist. [14] Rights of the postgraduate research student could be jeopardized if without sufficient knowledge to deal with unfair treatment in the competitive study environment.

University as a Trading Organization - Although the major role of the university is to generate new knowledge, servicing to the students in the form of lecture provision, research supervision and facility services, yet the university degree itself has become a commodity,
like any other form of physical good, could be sold in the competitive marketing environment comporting with the neo-liberal imperative to privatise public goods. [15] For the state of Victoria public university like Swinburne University of Technology Australia, the breaches of trade practise law, according to Victorian legislation, could amount to certain degree of damage claimed under Goods Act 1958 (Victoria in Australia), section 57 [16] if the dispute concerned mainly the physical aspect of object, or Fair Trading Act 1999 (Victoria in Australia), section 19 [17] if the source of the deadlock is related to university service provision.

Australian varsities are renown for attracting many students throughout the world to pursue various professional disciplines, but there exists complaints about poor quality of student services provided by certain defective university administration, [18] and Swinburne University of Technology Australia will have similar fate of being complained as other Australian varsities when trade regulations are not complied with the guidelines of Consumer Affairs Victoria in Australia. Even in Australian premium varsity Australian National University, such breaches of the contract by the university [19] did happen previously.

Situation when the University Breaches Contract - The university has the authority to take disciplinary action against errant staffs and students for breaching various varsity regulations, but it will be a question for certain Australian universities that breach contract at first instance, and when damages should be awarded to compensate for mental distress arising and to exemplify with punishment on outrageous conduct on administrative staffs involved. [20] In the decision to terminate the university academic position and postgraduate candidature of master and PhD studies, it will be worthwhile to refer to the court case of Ogawa v The University of Melbourne [21] and Tang v Griffith University [22] where the Australian law court process serve as a remedy against termination of PhD candidature could be a good source of reference for Australian research university [23] when postgraduate administrative disputes arise partly from contract between the university and the PhD students.

The relationships between the university and the postgraduate PhD research students are to be bounded by contractual law and industrial relation regulation. [24] In such unjust situation, the purported termination of contract, whether in the form of employment, scholarships and candidature in the context of varsity will constitute wrongful repudiation of the contract without being able to fulfil the conditions under which termination is allowed. [25] Sufficient evidences will be required to justify various reasons towards the termination according to Australian law, whether under Federal Commonwealth or State of Victoria’s legislation. [26]

Litigation against the University - Requesting the assistance from law court to settle disputes will never be desired by anyone who demand quick and efficient solution, but in some situations where one or more parties are reluctant to negotiate further peacefully, about the limits on legislative, executive and judicial power established by the constitution of Australia, such internal varsity disputes, maybe in the form between the citizens and governments, governments or citizens themselves, must be resolved by the law court, when the internal dispute resolution mechanism might not be well-functioning instead. [27] The jurisdiction of High Court of Australia to enforce observance of the rule of law by the officers of Australian Commonwealth government and state of Victoria statutory bodies, cannot be taken away by any political parliamentarians, varsity administrative officers and other parties with certain objectives, conferred by section 75 of the Constitution Act of Australia, when the High Court
of Australia hears the appeal from the lower courts about the reluctance of university as a state statutory body to settle the disagreement formally based on existing university regulations. [28]

Defence against Unfair Termination of Contract - Contractual relationships between the university and the members, that could be staffs and students, could be terminated by any party involved. In certain situation of complexity, one or both parties may have excuse for not performing the contract agreed initially although it might appear that both parties are in breach. The seriousness of breach could be a difficult topic to justify subjectively, when the part A, usually the university administrative staff that breached the contract of performance at first instance by imposing impossibility to achieve the target, withdraw the contract of funding against B the subordinate. [29] One example for graduate research students will be the withdrawal of research scholarships and termination of candidature by the research supervisors for non-compliance with ethics and quality, where in reality the defective university itself did not prepare sufficient facility and services for researchers, in addition to workplace relationships problem in the research teams, that could delay the performance of specific task due to poor managing skills among the research group leaders. Every party, no matter who should be blamed, will retain the rights to sue for damages prior to formal contract termination. [30] Mutual contract breaching of parties could be unintentional and insignificant until the disputes brought formally to under proper law court processes for analysis. [31]

Compensation Claim from University that Breaches Contract - In Common law, there are three possibilities that could be awarded to the university staffs and students that suffered due to contract breaches of the university by treating the mental distress incurred as - (a) non-pecuniary damage to non-compensable head; (b) non-pecuniary damage to a compensable head, subject to the evidence of damage and the operation of the causative, remote and mitigative limiting doctrine; (c) non-pecuniary damage to non-compensable head, with the possibility to award damages under special circumstances subject to the conditions in (b).

[32] University counselling and health services, in such situation of contractual disputes, could play important role in the determination of the degree of damage caused to the innocent party suffered due to contract breaching, with confirmation of the diagnosis from professional psychiatrist according to various Australian mental health acts. [33]

Mental Distress when University Breaches Contract - Performance of work and studies, especially related to open-ended research studies, are very subjective and will vary from one employer to the other. In the context of PhD research studies particularly, the research supervisors reserved the rights to terminate the studentships under the supervision if the research progress deemed unsatisfactory in view of professional judgment, influenced by personal human factors. If the contract of research studies are terminated, it will be uncertain whether the research supervisor, assumed as plaintiff, can recover the entire expenses, had there been no breach in the contract of research if the actual performance exceed assumed benefit. [34] University, that represents the research supervisors as staffs, could not be avoided the responsibility of reliance damages against the affected subordinates when the termination was placed voluntarily and wrongfully. [35] The contractual relationships between the graduate students and the university administrative staff member has also been investigated. Such contractual binding agreement could be opened or implied, ranging from employment, scholarships, financial assistance, facility usage etc. [36] Clearly drafted job offer agreement could at least prevent further legal disputes when any contractual parties
unaware and neglect the conditions applied in the document formally, where it is necessary to frequently remind each other.

University as a Corporation for Graduate Research Studies - Many arguments have been raised to determine whether the university could be treated as a corporation under Trade Practises Act 1974 (Commonwealth Australia). [37] For example, University of Western Australia once successfully challenged Australian Industrial Relation Commission (AIRC) that the Australian varsity could be classified as a “trading corporation”, under the jurisdiction of fair trading law but not only limited to the role of the said “institution” provided under Higher Education Funding Act 1988 (Commonwealth Australia). [38] Trade activities available inside the university campuses, for example, selling books, preparing cafeteria service, providing parking, venue renting and short course offerings etc, are involved by most staffs and students in the educational businesses. University is deemed to be eligible to be prosecuted under section 82 and section 87 of Trade Practises Act 1974 (Commonwealth Australia) if the educational programs, inclusive of postgraduate research studies towards the conferment of master and doctorate titles, contain deceptive elements and administrative faults that could jeopardize the future career and welfare of the students enrolled. [39]

The enrolled graduate research student in Australian varsities have to be aware that there will be no perfection of any university in every aspect of studies, and many disputes have to be ended up in law courts besides unreported cases of complaint and grievance organizations both inside the university and outside the learnt community. [40] Other relevant scope of liability that need to be beared by the graduate research student could be as below but not limited to the facts: (a) Facutal error : advertise interview and counsel students on the availability of research facility and professional support when in fact there is none or insufficient. [41] (b) Prediction inaccuracy : enrol research students with promise to graduate within 4 years, latter terminating the candidature followed by delaying the graduation ceremony; provide financial assistance at the beginning to recruit students to conduct research, and then reduce 50% of the wages or higher reduction in order to obtain certificate of postgraduate research studies. [42] (c) Celebrity advertising : Some professors do visit overseas agencies of education outside Australia about the multicultural student facilities available in Australian varsity with world class standard management alumni support, that in fact not available. [43] (d) Non-disclosure of important information : Provide 3 years research scholarships as living cost to research students without covering material and instrument for experiments, and request the researcher to complete the project on-time without prior notification and preparation. (e) Groundless opinion : Defame the reputation of research students by merely based on hearsay about research incapability as an excuse in termination. [44]

The Impossibility of the Performance of Contract : Certain contract between the university and staff members or students drafted initially might consist of errors. In this situation where the research supervisors have difficulties to communicate with the subordinates in certain irreconcilable differences, the contracts between the superior and inferior could be terminated earlier due to the impossibility of performance. If the unforeseen circumstances resulted to the impossibility of the contract execution, then both parties must decide whether on the true construction of the contract one or other party has undertaken responsibility for the subsistence of the assumed state of affair. [45] However, further disputes usually arises when
either or both parties failed to negotiate the remedies in some complicated situations, where the resolutions to vary the agreement could not be reached sometimes.

When the mistakes arises from the university, managed by the professional director that neglect important contractual requirement, then the subordinates reserve the rights to sue for damages in economic loss. There are five different pathways in which the director or professor as a research supervisor can be personally liable: (1) duty of care - skill and diligence. (2) Financial misconduct - improper salary. (3) fiduciary duty - loyalty, conflict of interest, good faith. (4) subordinate suits - class action, application to court on behalf of the company. (5) securities law - disclosure, insiders’ liability. [46]

Liability of University Research Supervisors - Research administrative staffs, especially those research group leaders with the title of professor or associate professor, should bear their own individual liability of their negligence rather than merely relying on the shield of the university when being prosecuted, when it is very difficult to quantify the liability of negligence for research supervisors in legal disputes. The author agrees with a view of a judge that “by no stretch of the imagination can it be sensibly argued that the law on this subject is clear and straightforward.” [47] There are many different ways, as understood by experienced researchers, that the research team superiors, especially in scientific and technological fields, could provide unclear and sometimes misleading suggestions about the research methodology and techniques that could not be performed without sufficient material, instrument and professional staff support. Laboratory conditions with physical and political restrictions sometimes could retard the progress of research studies towards completion on time. However, not all research supervisors are aware of such professional liability posses on them, leading to potential breaches of contract between or within the university and the research institute involved, leading eventually to research project failure. Subsequently the subordinate may brought an action against the university when the research contract was prematurely terminated by the party originally in fault that seriously breach the contract precede the subordinate breaches milder than the superior. [48] The director or the superior could be personally liable to the third party the plaintiff rather appointing the university as a sole defendant. [49]

In the case of Watts v Morrow, [50] Bingham LJ observed: “A contract-breaker is not in general liable for any distress, frustration, anxiety, displeasure, vexation, tension or aggravation which his breach of contract may cause to the innocent party. This rule is not, I think, founded on the assumption that such reactions are not foreseeable, which they surely are or maybe, but on consideration of policy”. The university research supervisor could terminate the contract of the subordinates, whether staffs or students under supervision. However, when insufficient research facilities and supports are given to subordinates, not as promised in the recruitment and enrolment processes, the termination on the ground of lack of working progresses could cause non-pecuniary damages to the subordinates, that could be in the form of PhD award for PhD students and future careers for every affected subordinate. The application of Watts v Morrow principle could entitle the victim to damages for discomfort caused by the termination of contract, under the similar situation of Farley v Skinner. [51]

Contract Termination – The Possible Remedy in the Case of University Graduate Research Studies - In the situation when the plaintiff, A, as a university, prosecute the defendant B, either as a staff member or graduate student, there could be two possibilities of the breaches:
(i) Termination at law where B is in serious breach. (ii) Termination at law where A is in serious breach. [52] The former breach (i) could be far more simple by just issuing the letter of termination of contract to B by A when significant breaches are observed. However, the situation will become complicated when A breaches contract precedes B, and the seriousness of breaches will need directions from the arbitrator, under mutual obligations concept regardless of the co-operation provided by the other party. [53]

When breach (ii) occur in the university administration, for example, by not providing appropriate supervision to research students, delaying the enrolment and graduation processes, paying lower salary to the subordinates even through oral agreement and simply altering the conditions of contractual award without prior approval from party B, latter terminate the research contracts on the grounds of slow research progress, dishonest research data and methodology application and other unreasonable accusations without good justification and sound evidence, neither A nor B could rely on the other’s conduct as amounting to repudiation when the dispute concerned was the effect of their mutual obligation owned to one another. [54] Certain judgments disallowed that a party in serious to terminate whereas contrary principle is still available. [55]

It will be less possible for a well-managed university in Australia, ranked top in the overall performance evaluation, to seriously breach the contract that jeopardize the rights of the staffs and students, in comparison to the poorly-performed and under-developing varsities, unless such good universities intended themselves towards deterioration. [56] There is not many excuses to blame the well-organized university A that terminate the the contract of B, where it is normal for A to breach non-seriously in the agreement with sufficient legal administrative support. There must be a direct causal relationship between the non-compliance and failure to complete if non-compliance with a contractual obligation is to be taken away the defaulting party’s right to terminate. [57]

Mental Distress for Contract Breaching Caused by Research Supervisors - When the staffs and students did not perform well in the work assigned, then they are liable to be terminated of employment and candidature for breaching the contract between them and the university that required the subordinates to perform the duty up to acceptable level of standard and quality, that is needless to be repeated again as the conditions of employment and awards for those who receive stipends or other forms of financial support through the university. However, severe mental distress could be caused to the subordinates when wrong instructions are given by the university at first, leading to inefficiency and physical inconvenience that could make the university liable to pay compensation. [58] Damages for injured feelings cannot be recovered as a result of contract breaching since the degree of sufferings caused could be difficult to quantify, laid down in Addis v Gramophone Co Ltd. [59] University is deemed to provide convenient study and research environment for all researchers towards advancement. If the affected subordinates failed to enjoy peace of mind, sentimental benefit and pleasure due to the improper management of the research administration, maybe outdated research facilities and unwelcoming personnel, then that could be an exception to the Addis rule. [60] where awards could be made to the victims, anonymous to the cases where a negligent solicitor failed to obtain a non-molestation order [61] and where a wedding photographer failed to perform his duty. [62]

Universally, the law related to mental distress caused by contract breaching, whether related to the context of university could be in an uncertain state of chaotic because the approach
utilized could be unprincipled and create unfair results, similar to the nature of disputes in fact especially related to progress performance evaluation. [63] University rules and regulations are necessary to provide certainty and clarity for employer and employee in order to comply with the contract and prevent breaches, but when they begin to create inconsistencies with injustice, then the application and validity of the regulations could be questionable even if the university rules are well-designed, causing more mental distresses to all parties involved when the innocents are sacked for being blamed for contract breaching, etc. [64] Detailed evaluation on the contract breaching among university community “can make you head spin” as in Farley v Skinner, [65] even the concept of the dispute settlement was simple. [66]

Voluntariness of University Contract – The Limitation - Contract of research studies drafted by the university, as usually defined by many contemporary contract literature, bear the voluntary and autonomous obligation, influenced by the classical view of contract applied since 19th century. [67] Many subordinates like the lenient administrative approach that could be friendly and welcoming, enhancing the open research with more freedom of thinking without strict obligation to rigid rules. However, there exist limit in the voluntariness in the contract performance when unforeseeable dispute situations arises that might require all contractual parties to abide to certain compulsory contractual terms. [68] In order to perform the rights drafted under the contract voluntarily, there will be such a requirement to adjust the performer of the contract from time-to-time, with frequent updates in order to suit to different newly arisen situations that could be unexpected while drafting the contractual document. [69] Non-performance terms available either in oral or written contract, that will usually assumed to be fulfilled voluntarily, could cause problematic confusion to the contract administrators on the key focus of the initially drafted conditions and terms of contract. In order to avoid breaching of university contract, standard form of contractual terms are usually applied as estimated by W. David Slawson in year 1971. [70] Similar to any other forms of scriptures, certain contractual terms could be easily misunderstood and consist of ambiguities with diversified interpretation, then legal process will be required to clarify the read and unread terms available to the contract, especially related to money matters in the university scientific research administration that could attract more attention to every contractual parties, with possible of the involvement of law courts and tribunals. [71]

Law of Tort against University for Breaching Contract due to Professional Misconduct - Human beings are inclined towards making mistakes and there is also no exception for university professors and subordinated research staffs that could be engaged in professional negligence as well. [72] This aspect of professional negligence has also been described in the decision of Hedley in Bryne and Co Ltd v Heller and Partner Ltd [1964] A. C. 465 with the following description : “… the existence of foreseeable harm, caused to the plaintiff by the defendant where the two were in a special relationship with each other, created by the assumption of responsibility by the defendant…”.

It is a duty for the superior to provide accurate instructions and guidelines to subordinates. Nevertheless such breaches of contract by the superior sometimes are difficult to be judged when typical standard rulings are not available. [73] It is not only limited to university professor, but for any other professionals in different sectors, that could be made liable to economic losses if there is “the application of special skill for other’s assistance that rely on such equivalent relationships in a contract with interests and responsibilities on another”. See
Claiming Research Grant – Appropriateness in the Context of Australian Universities - Universities in Australia obtained huge amount of financial support to operate research institutes and conduct many high quality researches for the Australian federal government. The funding obtained could be in the form of research grant, student scholarships and amenities support. Good universities will be able to properly manage funding but there exist unfair practises in the distribution of the financial resources, that made the defective university to be liable to be punished under Trade Practises Act 1974 (Commonwealth Australia), [74] under the civil claim list, as well as Criminal Code Act 1995 (Commonwealth Australia) under criminal list. In the United States of America (USA), there exist provision of federal USA statute, named False Claim Act (FCA), that intends to “combat fraud against the federal USA government”. [75] Such legislation allows research team members of any staffs or students to sue on behalf of the USA government with the award of portion of the damage. However, such practices has not been observed in Australia where alternative legislations are rather applied to control the financial action of the research grant management in varsities.

Fundamental Breaches of Contracts in the Context of Australian Varsity - University is an institution of higher learning that produces professionals from different fields, inclusive of law, commerce, management etc that are directly related to the administration of the university. However well-managed an organization, there exist fundamental breaches where the doctrine was an agglomeration of disparate lines of authority, where some concerned with certain types of term and others with breaches of certain kinds. [76] Corrective procedures could be more immediate and effective for well-managed varsities than those subquality counterparts in order to prevent further problematic disputes. [77] During the termination of research contract of employee and research students, unfair terms available in addition to unsound reasonings could be criticized in the situation when the contracts consist of error of laws or not properly executed as initially agreed. [78] Certain termination could be deliberate acts of the employers or research team leaders to remove unfavourable subordinates regardless of the provision of the contractual terms with diversified interpretation, [79] whereas others could be the disciplinary issues of subordinates where the removal could prevent further losses and disturbances to research project operations.

Comment on the University Student Services of Advocate - Many universities do provide internal advocates to assist the undergraduate and postgraduate students to settle disputes with the university administration where theoretically the position of the student lawyer should be impartial, but it is not in reality when politically influenced of the varsity sometimes may retard the fair judgment of the university-employed advocates. These issues has also been indirectly justified the situation where a person or organization could not form contract within the varsity to be fully independent even if acting in different capabilities traditionally. [80] Such “two-party rules” has also been applicable in any goods or services transaction. [81] However, there exist opposite views that the university-salaried advocates for students could act as both the university employee, at the same time, act as observer and solicitor for the students to challenge certain unfair decision and procedural irregularities of the university wherever appropriate. Unfortunately such dual-functional university advocate seldom be encountered in any Australian varsity student associations. [82] Then it will be a
question whether the student fees paid to the university could be appropriately spent on advocacy services when needed with impartiality.

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[8] See Ogawa v The University of Melbourne in High Court of Australia, Tang v Griffith University in Supreme Court of Queensland in Australia.


[10] Example is Victorian Civil and Administrative Tribunal (VCAT), Equal Opportunity and Human Rights Commission of Victoria (VEOHRC), Administrative Appeal Tribunal (AAT), Ombudsman – Commonwealth and states in Australia etc.

[11] This essay is related to Swinburne university of Technology Australia; Commonwealth Australia Uniform Corporation Act 2001 could also be used concurrently with Bond University Act 1987 (Queensland in Australia), Australian Catholic University (Victoria) Act 1991 (Victoria in Australia) etc.

[12] Administrative law, namely Administrative Decision (Judicial Review) Act 1980 (Commonwealth Australia) or the equivalent state law of Administrative Law Act 1978 (Victoria in Australia) etc.


[16] Part I – Sale of goods, Division 6 – Actions for breach of the contract, Remedies of the seller: Damages for non-delivery - (1) Where the seller wrongfully neglects or refuses to deliver goods to the buyer the buyer may maintain an action against the seller for damages for non-delivery.

[17] Part 2 – Unfair practises: Accepting payment without being able to supply as ordered (1) A person who in trade or commerce, accepts payment or other consideration for the supply of goods or services, and who - … (b) supplies goods or services that are materially different from the goods or services to which the agreement to supply related – is guilty of an
offence and liable to a penalty of no more than - … (d) 1200 penalty units, in the case of body corporate


[19] Fennell v Australian National University [1999] FCA 989 (22 July 1999) in Federal Court of Australia could have been challenged successfully, although the application is initially dismissed, with certain facilities and programs advertised could not be provided by Swinburne University of Technology Australia as well during the enrolment of PhD studies program.


[21] [2005] FCA 1139 (22 August 2005) in High Court of Australia.

[22] [2003] QSC 22 (14 February 2003) in Supreme Court of Queensland.

[23] This has been quoted for Swinburne University of Technology Australia PhD appeal.

[24] Australian Industrial Relation Commission (AIRC) did not agree the existence of such employment relationship in Mr Chuen-Tat Kang v Swinburne University of Technology Australia – PR 974771 [2006], AIRC 775 (4 December 2006).


[28] Commonwealth of Australia Constitution Act, section 75 : Original jurisdiction of High Court (of Australia) – In all matters (1) arising under any treaty; … the High Court (of Australia) shall have original jurisdiction.


[33] Mental Health Act : 1986 (Australian Capital Territory), 1990 (New South Wales), 2000 (Queensland), 1986 (Victoria), 2009 (South Australia), 1996 (Western Australia), 1996 (Tasmania)


[35] 110 US 338, 346 - 7 (1884), Bradley J concluded that : “The party who voluntarily and wrongfully puts an end to a contract and prevents the other party from performing it, is estopped from denying that the injured party has not been damaged to the extent of his actual loss and outlay fairly incurred.”


Trade Practises Act 1974 (Commonwealth Australia), Part VI - Enforcement and Remedies, section 82: Actions for damages; section 87: Other orders.


Contravene Trade Practises Act 1974 (Commonwealth Australia), section 52.

See Ogawa v The University of Melbourne in High Court of Australia and Federal Court of Australia, multiple cases.

Orr v University of Tasmania [1957] HCA 32 in High Court of Australia, sexual relationships.


Example of termination disallowed: [2005] N. S. W. S. C. 818 at [92], per White J.; Wight (1987) 11 N. S. W. L. R. 470 at 478 - 487, per McHugh J. A.

Example of world class university comparison: Webometric and Times.


Example: Hubbs v London and South Western Railway Co (1875) LR 10 QB 111, 122, Blackburn J in failure to deliver to correct destination.

Example: Hubbs v London and South Western Railway Co (1875) LR 10 QB 111, 122, Blackburn J in failure to deliver to correct destination.


Diesen v Samson (1971) SLT (Sh Ct) 49.

[65] [2001] UKHL 49.
[78] Taylor v Liverpool and Great Western Steam Co [1894] P226 at 237; and Nugent v Smith (1896) 1 CPD 423, as examples.
CHAPTER 2 : AUSTRALIAN SOCIAL SECURITY CRIMES : BASIC CONCEPTS AND UNDERSTANDINGS FOR NON-LEGAL PRACTITIONERS (JUNE 2010)

Author : Chuen-Tat Kang [*]

Abstract : Social security crimes could be committed intentionally or unintentionally by the claimant. Those who were facing charges by the plaintiff of Commonwealth Australian government Director of Public Prosecution (DPP) could experienced certain degree of anxiousness if without sufficient legal knowledge to understand the basic human rights available to defend oneself from being accused in law court. Limitation of legal assistance from the community legal centers would encourage do-it-yourself independent legal studies habit, where the defendant may need to prove the absence of dishonesty in the crime commitment. The article provides basic information on the social security crimes for those non-legal practitioners in the settlement of disputes of social security with the government of Commonwealth Australia.

Intention in the Crime Participation in Australian Social Security - Australian government do provide various forms of social security support for those eligible citizens and residents that require specific care, mainly in the form of financial welfare. [1] However, such payment from the government of Commonwealth Australia could be easily subjected to abuse, whether intentionally or unintentionally, by the claimant that approached Centrelink Australia for financial assistance and concession card application in order to cover the high living cost of Australia, mainly on short term basis. [2] The potential crimes that could be convicted are mainly of white collar [3], that are mainly committed by people employed in the clerical and professional occupation or related to the person engaged in administrative or clerical rather than manual work. Commonwealth Australia Director of Public Prosecution will need to prove the mens rea, or the root of the formation of the conspiracy with clear intent to commit crime, factors of the instigation towards the crime commission by the conspirator, precise contemplation of unlawful agreement etc, before charging the defendants in the criminal list of the law court. [4] The same principle is hold for any crime, that analogized abetting and aiding liability to one who counsels, procures or command one another in crime commission. In Australia, there are different established crime-related legislations that could cater the related offences, including the social security matters. [5]

Evidences of Social Security Fraud in Australia - Director of Public Prosecution (DPP) of Commonwealth Australia would normally sue the defendant of presumed criminal via information collected from the relevant fraud investigation team. However, cross examination of the evidences submitted may often offer unsatisfactory methods by opening the door to otherwise damaging and inadmissible information that the government agents learnt from the Centrelink’s investigators. [6] Example of inadmissible evidence is intercept evidence, such as evidence of a telephone conversation between the defendants in criminal conspiracy, is not accepted in English law. [7] Obtaining information about the fraud engaged by the defendants illegally could breach human rights and privacy, and controversial raised whether evidence obtained by illegal or improper means should be admitted or rejected at court trial. [8] If the breach has began from the part of the plaintiff or Commonwealth Australia Director of Public Prosecution (DPP), by collecting information of private life of the defendant, obtaining bank statement and social security communication details, that maybe irrelevant to the source of dispute, then the information collected by Centrelink Australia Fraud Investigation Team maybe excluded in law court submission. [9] If such
prosecution is allowed then overprosecution and management failures might occur in the part of the related government department of plaintiff, causing wastage of governmental and law court resources to sue the potentially innocent defendant for small mistakes, leading to inefficiencies when Alternative Dispute Resolution (ADR) has not even been applied sometimes by the plaintiff to simplify the dispute solution procedures. [10]

Appeal for Social Security Fraud in Conflicts and Mistakes of Law - If the Australian social security claimant being charged under Criminal Code Act 1995 (Commonwealth Australia), section 135.2 that may impose sentence of imprisonment of 12 months if found guilty, then such conviction may not be appropriate for mild offenders that merely forgot to report circumstances changes, innocent mistakes of law or the claimants etc, that may contradictory to Crimes Act 1914 (Commonwealth Australia), section 17A on the part of Commonwealth Australia Director of Public Prosecution (DPP). [11] The judge in the case of social security fraud, accordingly, will need to determine whether the offences were committed for the reasons of “greed or need”, and one of the mitigating factors will be that the offender “was in need but not greed motivation”. [12] Imprisonment sentencing will need to be carefully considered to ensure the mens reas inexistence to prevent abuse of welfare assistance of Centrelink Australia. [13] Blind imprisonment may cause reoffending, and in such situation, alternative punishment for caution, namely by fine or community-based orders, may need to be considered by Australian law courts. [14]

Sentencing of Social Security Fraud Offenders - The defendants of social security frauds in Australia, if found guilty by the judges of law courts, could face a number of possible penalties. Some details of the offender’s background, history of employment, relevant attitudes, health and education etc could be referred in the sentencing judgment evaluation with some concluding comments. For mild offender, the respondent will normally submit the opinion that “a term of imprisonment may not be the most appropriate sentencing option”, “a period of supervised conditional liberty would offer little to the offender” and “a monetary penalty would be difficult for the for the respondent to comply with”, with “home detention may prove to be an inappropriate option”. Better alternatives could be “a community service order that may serve as a disciplinary measure and recompense the community” and “an unsupervised recognizance may serve as a sufficient deterrent in the matter” when the respondents’ voluntary repayment commitments are upheld. [15] Since the social security fraud in Australia is a federal offence, Crimes Act 1914 (Commonwealth Australia), section 19 - 22 will be the best reference for sentencing, imprisonment and release of the conviction. [16] The presentence reports prepared by Commonwealth Australia Director of Public Prosecution (DPP) could also be challenged in its content. [17] If inappropriate sentences are placed towards the offender, then the sentence itself maybe so excessive or inadequate as to manifest such error. [18] If identified error was absent, an appeal against sentence will be impossible unless the facts of sentence were plainly unjust or unreasonable. [19]

Overpayment and Debt Recovery in Australia Due to Administrative Error - Social Security Act 1947 (Commonwealth Australia), section 140(2) provides that overpayment of pension, allowance or benefit may be recovered from the claimant of financial support from Centrelink Australia under civil proceedings. [20] Once the civil recovery actions had begun then the other follow-up criminal proceedings against the claimant may constitute double jeopardy when Commonwealth Australia Director of Public Prosecution maybe prevented to sue the defendant with autre fois convict offence. Under the provision of Audit Act 1901 (Commonwealth Australia), “... overpayments of income tested pensions and benefits
involving both administrative error and receipt in good faith maybe waived by a delegated officer... 

[21] There are, in certain situations, overpayments that could be due to administrative errors of Centrelink Australia but not fully due to the errors caused or contributed by the beneficiary, inclusive but not limited to the most common omissions, machine error, mistakes by Centrelink officers of Commonwealth Australia, employees and agents. [22] The defendant may also be protected under receipt of good faith, without mens rea to intentionally deceive, where there was no fault on the part of beneficiary and the recipient could not have known or did not know that such social security payment was not eligible to be received.

Alternative Dispute Resolution to Deal with Social Security Fraud - When fraud is being detected accidentally in the Australian social security claiming, the relevant department, normally related to Centrelink Australia, should conduct internal investigation, correction and adjustment of the existing imperfect procedures prior to resorting to external law court actions, that could sometimes be cost inefficient, less effective and money wasting of the taxpayers’ income. [23] Fraud and other potentially complex trials could have been bedeviled for years due to over-prosecuting and management failures, that may lead to abuse of law court process among the Director of Public Prosecutions (DPP), that should in fact cut down the evidence to bare essential and to ignore fringe suspects. [24] Alternative Dispute Resolution (ADR), namely via negotiation, mediation and arbitration etc, were recommended to be adopted by Commonwealth Australian government officers properly before the formal law court prosecution where investigation, preparation, committal, pre-trial review and trial the present arrangement could be blatant delay and abuse. [25]

Compensation Eligibility for “Miscarriage of Justice” in Australian Social Security Fraud - Under Criminal Code Act 1995 (Commonwealth Australia), section 135.2, those offenders could be sentenced up to one year imprisonment if found guilty for conducting fraud in Centrelink Australia benefit claiming procedures, normally related to the receiving of financial assistance from Australian government where the claim was not entitled to. However, those convicted of the social security crimes, latter reversed of conviction on the ground of newly discovered facts beyond reasonable doubts, could seek compensation from Australian government for wrongful conviction if proven, as provided under International Covenant on Civil and Political Rights of United Nations, Article 14(6). [26] In United Kingdom (UK), almost similar provision is also available under Criminal Justice Act 1988 (UK), section 133(1). If Commonwealth Australia Director of Public Prosecution (DPP) wrongly sue the defendants who was latter found not guilty in reversed decision of judges of law court, then compensation maybe able to be sought from the part of plaintiff or law court. [27] Proper negotiation and investigation are recommended for DPP for the party of the Commonwealth Australian government before potentially lengthy and costly legal actions proceed, where the defendant maybe compensated if wrongly accused.

Trial in Social Security Offences - Article 14(1) of the International Covenant on Civil and Political Rights upright the principle of fair trial in whatsoever criminal justice, inclusive of those related to social security. There are various ways where social security offences could be prosecuted, namely through Social Security Appeal Tribunal (SSAT), Magistrates Courts in Australia etc after preliminary investigations conducted mainly by the Centrelink Fraud Investigation Team. Director of Public Prosecution will need to initiate the proceedings against the defendants, beginning from lower courts, whether under the state legislation of State Magistrate Court or Commonwealth Australia laws under Federal Magistrate Court of
Criminal Offences in Social Security System in Australia - Payment of various financial benefits under Australian social security system is pecuniary. Such welfare system could be susceptible to abuse by the officer-in-charge or the claimant intentionally or unintentionally, where the offender could be charged under Australian Criminal Code Act. [33] The offence of obtaining financial advantage by deception contains of 3 major elements - (a) financial advantage; (2) deceptive application; (3) obtain via dishonesty. [34] Model Criminal Code of Australia, where many Australian federal and state criminal code derived from, provides that “obtaining financial advantage by deception : A person who by any deception dishonestly obtains for himself, herself or another any financial advantage is guilty of an offence. [35] Ignorant social security claimant is recommended to obtain assistance form completion in order to avoid unnecessary accusation of criminal where in fact the claimant could be needy in other equivalent form of fiscal support.

A person could be guilty of fraud if the judges are convinced that the defendant or the crime committer was aware that ordinary people would perceive the wrongdoings in a moral sense despite the prima facie legality of the activity. [36] If social security fraud has been conducted in a single event, whether due to intentional conduct or ignorant mistakes, then the related person could not be retried for offences in respect of which has been acquitted, and immune from further prosecution under the double jeopardy provision of the common law. [37]

Application of Law of United Kingdom as Reference to Social Security Fraud in Australia - In the British Commonwealth nations, Common Law related to theft could be applied as case law in the relevant situations. The fraudulent-related law of Australia in such situation are mainly derived from United Kingdom laws that can serve as beautiful examples, similar to False Claim Act 1863 (United States of America, USA) in misclaiming social security payment where such welfare systems are available in the advanced nations. In United Kingdom (UK), Fraud Act 2006 (United Kingdom) section 1(1) provides different way of offence commitment, section 2 : fraud by false representation, section 3 : fraud by insufficient information disclosure etc. Section 1(3)(a) of Fraud Act 2006 (United Kingdom) could be
equivalent to Criminal Code Act 1995 (Commonwealth Australia), section 135.2, where a person found guilty of fraud on conviction summarily could be imprisoned not exceeding 12 months. However, the punishment alternatively for fine has been stated in the United Kingdom’s law but stated separately from Criminal Code Act 1995 (Commonwealth Australia) in other Australian legislation. [38]

Such similar white collar deception offences in United Kingdom (UK) could also be prosecuted under Theft Act 1968 (UK). The Law Commission of United Kingdom, when dealing with the problem of definition of too many offences as opposed to one offence covering various fraudulent conduct, stated that: “By relying on a range of specific fraud offences, defined with reference to different types of consequences, the law is left vulnerable to technical assaults. [39] In order to simplify the prosecution procedures effectively, general offences of fraud would be the preference, that could reduce the complication of the fraud law, whether related to social security or not, and could prevent the defense of double jeopardy in the part of the defendant.

Actions of Relevant Authorities in the Prevention of Social Security Fraud - In the process towards the prosecution of Australian social security fraudster, there may be necessary to impose custodial sentence against the offenders when the offence become prevalent in certain period of time. As much information about the detected offences by the Centrelink Fraud Investigation Team, as possible, may need to be collected, screened and analyzed to prevent recurring of fraud. Collected material mentioned could serve as evidence in relevant law courts and tribunals that should be arranged, filed and further verified properly following standard procedures in order to be admissible when demanded in any part of the legal processes. [40] Social security fraud prevention, if without substantial mitigating circumstances, namely from Centrelink Australia and Department of Families, Community Services and Indigenous Affair Australia: (1) Social Security fraud should be treated seriously with deterrent penalty is called for. Such fraud threatens the financial security for community members in need, as a basis for Australian social security system. (2) Custodial sentence is recommended to be applied in serious frauds without substantial mitigating circumstances, and fine should be imposed for first offence with mitigating circumstances when the social security fraud is difficult to detect. Appropriate and fair penalties against the fraudster should be considered to protect the revenue of Australian government. [41] Warnings may be given to the law court and tribunal before current standards of penalties imposed departed substantially, that could be varied from one location to the other, that should in fact be consistent sentencing in similar types of offences throughout Australia. [42]

Legislation for Prosecution of Fraud in Federal Commonwealth Australian Government - In Australia, Crimes Act 1914 (Commonwealth Australia) will usually be applied against the fraudsters that deceived enormous amount of money where the Commonwealth Australian government is entitled, for example, from subsidies, benefit and other entitlements. Prosecutions are also regularly brought under the provisions of Crimes Act 1914 (Commonwealth Australia) below: “False pretences (section 29A); Imposition (section 29B); Fraud (section 29D); Forgery and related offences (section 65 - 69); Stealing or receiving (section 71); Falsification of books and records (section 72); Bribery (section 73, 73A); Conspiracy to defraud [ section 86(1)(e) or section 86A ]”. Minimum penalty for these offences is 2 years imprisonment for imposition under section 29B up to maximum penalty of 20 years imprisonment and/or a fine of Australian Dollar (AUD$) 200K for conspiracy of defraud under section 86A. [43] Since large amount of revenues from taxpayers and
resources of Australia involved, fraud prosecution has constituted one of the largest amount of work for Commonwealth Australia Director of Public Prosecution (DPP) when the money of Australian government has been an attractive fraud target, amounted to Australian Dollar (AUD$) 148,121 millions for taxes, fees and fines in year 1988 - 1989. [44]

Definition Applied in Proving Fraud in Australian Social Security Fraud – Dishonesty - Although English Common Law or Law of Commonwealth has served as reference for the legal system particularly in the previous British colonies, yet there are slight differences observed in the definition of various terms used in criminal law, but bear the same objectives to deter criminal offences. In the definition of “dishonesty”, the English Court of Appeal once said: “In their own lives they have to decide what is and what is not dishonest. We can see no reason, when in a jury box, (members of a jury) should require the help of a judge to tell them what amounts to dishonesty... it will be sufficient if the trial judge instructs the jury that the Crown must prove that the accused acted dishonestly. [45] Current standards of ordinary decent people could also be applied in the definition of dishonest application as well.

Ghosh formulation could also be applied in the determination of “dishonesty” among the defendants of Australian social security, via two stage test : (1) whether, what was done was dishonest, according to the ordinary standards of honest and reasonable people; (2) whether the defendant himself must have realized that what he did was by those standards dishonest, if it was dishonest by those standards. [46] Commonwealth Australia Director of Public Prosecution (DPP) must prove beyond reasonable doubt that - (a) the accused entertained no honest belief; (b) the accused acted dishonestly. However, the accused does not have to prove his innocence. [47]

Comments on the Methods of Prosecution of Social Security Fraud in Australia - There are various ways that will enable Commonwealth Australia Director of Public Prosecution (DPP) to take actions against the social security fraudsters, mainly by civil and criminal proceedings. Many Commonwealth Australian government agencies will seek for those enforcement techniques that are the most resource efficient and apply the least investment for the best short term political results. However, these are seldom be applied in criminal prosecution even in Federal Commonwealth Australia social security department when plethora of techniques including negotiation, goods seizure, penalties compounding, penalty notices, cautions and citation with alternative methods short of prosecution has been practiced in the civil proceeding particularly among revenue agencies in Australia. [48] Prosecuting social security offences in law courts could be very expensive and unnecessary when legal actions against undesirable social behaviour is clearly not the only devices in the criminal justice system in Australia. [49] In certain fraud cases proof of fraudulent intent is necessary to justify the many evidences submitted by the plaintiff Commonwealth Australia Director of Public Prosecution (DPP) in order to determine the admissibility of many supporting material supplied before the judges. [50] In relation to all prosecution of offences against the law of Commonwealth Australia, the Director of Public Prosecution (DPP) has an over sighting role and may give directions or furnish guidelines to investigators, inclusive of Centrelink Australia Fraud Investigation Team in federal Australian government social security system. [51]

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[11] Crimes Act 1914 (Commonwealth Australia), section 17A: Restriction on imposing sentences - (1) A court shall not pass a sentence of imprisonment on any person for a federal offence, or an offence against the law of an external territory that is prescribed for the purposes of this section, after having considered all other available sentences, is satisfied that no other sentence is appropriate in all circumstances of the case.
[16] See Part IB, Division 3 - Sentences of imprisonment; Division 5 - Conditional release on parole or license; Division 7: Acquittal because of mental illness; Division 9: Sentencing alternatives for persons suffering from mental illness or intellectual disability; Division 10: Miscellaneous.
[23] Other example of internal dispute settlement recommendation: *Ogawa v Secretary, Department of Education, Science and Training* [2005] FCA 1472 (21 October 2005), paragraph 9(1) and 9(2).
[26] “Where a person has by a final decision been convicted of a criminal offence and when subsequently his conviction has been reversed, or he has been pardoned, on the ground that a new or newly discovered fact shows conclusively that there has been a miscarriage of justice, the person who has suffered punishment as a result of such conviction shall be compensated according to law, unless it is provided that the non-disclosure of the unknown fact in time is wholly or partly attributable to him”.
[31] Example offences are false incoming reporting, misclaiming the wrong package of assistance, providing wrong information of application etc.
[32] *Mens rea* (page 1097) : the intention or knowledge of wrongdoing that constitutes part of a crime, as opposed to *actus reus* (page 17) : action or conduct which is a constituent element of a crime – Oxford University, “Oxford Dictionary of English”, Second Edition (Revised), Oxford University Press, United Kingdom.
[33] Derived from Theft Act 1968 (United Kingdom) c60, section 16, with updates reported controversially by Criminal Law Review Committee United Kingdom.
[34] Example : *R v Licardy* (Unreported Supreme Court of New South Wales, Court of Criminal Appeal, Loveday AJ, Badgery-Parker and Bruce JJ, 26 May 1995)

[42] Example is: *Yadley v Betts* (1979) 22 SASR 108 at page 114, per King CJ.


[51] See Director of Public Prosecution (DPP) Act 1983 (Commonwealth Australia), section 11.
CHAPTER 3 : ARGUMENTS OF CURRENT MALAYSIAN LEGAL SYSTEM – PERSONAL COMMENTARY ON SELECTED LEGISLATIONS (SEPTEMBER 2011)

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Abstract : Malaysia is a developing nation that gained independent from British on 31 August 1957. The political culture, social and economy changes tremendously when the nation becomes more advanced than the time during the British colony. More and more rules, laws and legislation are developing concurrently with the movement of time from old to the new generation of Malaysia to meet the contemporary requirement, with the amendment and deletion of obsolete legislations, besides addition of new laws. Although Common Law in Malaysia, as a member of Commonwealth countries, are derived from the British laws, adaptations are required in order to suit the trend of the Malaysian society, executable for different purposes in Malaysia, as major guidance of human activities in the developing nation. The new acts may only be accepted with legal validity, for the use throughout Malaysia, when the drafts are passed by the Lower House and Upper House in the parliament of Malaysia, approved by the King of Malaysia. Those laws accepted in the Parliament does not necessarily means that no flaws exists even majority of the parliamentarian agree without objections to the new acts, even though checking has been performed by the representatives of the people. Detection of various mistakes and execution problem of such legislation did not require any law specialist or professional knowledge, but any mindful person, with acceptable language skills and general knowledge, may be able to assist in the rectification in the error of laws. Examples of detailed studies concerning the problems that might raise of applying various local and international legislations in Malaysia are given as follows:

SECTION ONE : UNIVERSITY AND UNIVERSITY COLLEGES ACT 1971 (MALAYSIAN ACT 30)

University and University Colleges Act 1971 (Malaysian Act 30) section 15 (Part III : Universities) - (1) No person, while he is a student of the University, shall be a member of, or shall in any manner associate with, any society, political party, trade union or any other organization, body or group of persons whatsoever, whether or not it is established under any law, whether it is in the University or outside the University, and whether it is in Malaysia or outside Malaysia, except as may be provided by or under the Constitution, or except as may be approved in advance in writing by the Vice-Chancellor. (2) No organization, body or group of students of the University, whether established by, under or in accordance with the Constitution, or otherwise, shall have any affiliation, association or other dealing whatsoever with any society, political party, trade union or any other organization, body or group of persons whatsoever, whether or not it is established under any law, whether it is in the University or outside the University, and whether it is in Malaysia or outside Malaysia, except as may be provided by or under the Constitution, or except as may be approved in advance in writing by the Vice-Chancellor. (3) No person, while he is a student of the University, shall express or do anything which may be construed as expressing support, sympathy or opposition to any political party or trade union or as expressing support or sympathy with any unlawful organization, body or group of persons. Malaysian Act 30 Section 15A : (1) No student of the University, or any organization, body or group of students of the University, shall, in or outside the Campus, or in or outside Malaysia, collect or attempt to collect, or promote or attempt to promote any collection of, or make any appeal
orally or in writing or otherwise or attempt to make any such appeal for, any money or other property from any person, not being money or property due or about to fall due under or by virtue of any written law, contract or other legal obligation.

The provision of University and University Colleges Act 1971 (Malaysian Act 30) section 15 (1) - (3) and 15A(1) has been deemed unconstitutional that have indirectly denied the rights for freedom of association among Malaysian university students that have been considered an adult instead of under-aged kids. In the community of varsity as a tertiary institution of higher learning, everybody is free to associate with any legal bodies in order to be involved in any healthy activities without breaching the rules, at the same time, being able to cope with the heavy load of study, provided that such university students do not abuse the name of the university for any extraneous purposes that may be deemed illegal and may interfere with the university administration when such title of university students are applied. The provisions of University and University Colleges Act 1971 (Malaysian Act 30) section 15 (1) - (3) and 15A(1) are recommended to be amended where the approval in writing by Vice Chancellor may not be practical for huge numbers of university students having some form of connection with many different organization throughout the world. There is no need to control the freedom of association among university students that have been involved in beneficial activities for the communities. If such control is truly required to restrict certain illegal activities among university students, then the university in Malaysia may need to establish very efficient registering and investigative bodies that typically handle various activities of the students at very fast and accurate rates to resolve various issues that may happen in the activities, within short times, otherwise what is the point of setting up such legislations when it has been proven not practicable in reality?

University and University Colleges Act 1971 (Malaysian Act 30) section 15 (Part III : Universities) D. (1) Where a student of the University is charged with a criminal offence he shall immediately thereupon be suspended from being a student of the University and shall not, during the pendency of the criminal proceedings, remain in or enter the Campus of that or any other University. (2) Where a court finds that a charge for a criminal offence is proved against a student of the University, the student shall, immediately thereupon, cease to be a student of the University, and shall not remain in or enter the Campus of that or any other University. (3) A student of the University who is detained, or is subjected to any order imposing restrictions on him, under any written law relating to preventive detention or internal security, shall, immediately thereupon, cease to be a student of the University and shall not remain in or enter the Campus of that or any other University.

University and University Colleges Act 1971 (Malaysian Act 30) section 15D(1) - (3) has been deemed denying the basic human rights of any criminals by having the terms “shall not remain in or enter the Campus of that or any other University” when in fact universities and colleges are public venues accessible for everybody, unless the safety issues in Malaysian society is alarmed because the Malaysian authority has failed to protect the residents from the potential attacks by criminals hidden in any public places in Malaysia, when the Malaysian community safety standards falls behind many countries in the world around year 2010 that retard the foreign investment and businesses to Malaysia. It is all right not to allow the suspected criminal to enter the location where the crimes may have happened in one campus, but not “any other university” that may be outside Malaysia where Malaysian government has not authority to control over it. Furthermore, such provisions of the abovementioned
legislations are deemed inappropriate that have indirectly assumed the suspected as criminal even unproven.

University and University Colleges Act 1971 (Malaysian Act 30) section 21 (Part IV : University Colleges) - (1) The Yang di-Pertuan Agong may by regulations prescribe the Constitution of a University College. (2) The Yang di-Pertuan Agong may at any time amend the Constitution of a University College.

The provision of Malaysian Act 30 section 21(1) and 21(2) may have provided excessive power to the King for the Federation of Malaysia or in Malay language term “Yang di-Pertuan Agong” to prescribe and amend Constitution of University College in Malaysia even without consulting the opinion of Malaysian public about the practicability of such action of the ruler under democratic system in Malaysia where the objective power of the majority people under the ruler should be greater than the ruler in administrative decision making concerning the public interest. The King may also need to comply with majority interest even the King holds supreme power of ruling in the nation. As recommendation, the provision of the Malaysian Act 30 section 21(1) and 21(2) should be amended to allow special Board of Director of the Malaysian University College to vote on behalf of public opinions in favour of the majority when intend to alter Constitution of a University College in Malaysia.

University and University Colleges Act 1971 (Malaysian Act 30), First Schedule section 4(2) (Part I : The University : Powers of University) : If the Yang di-Pertuan Agong is satisfied, with a view to maintenance and promotion of the Federation’s foreign relations, that it is necessary to confer an honorary degree upon a foreign dignitary, on the direction by the Yang di-Pertuan Agong the University shall confer such degree as stated in the direction.

Malaysia intends towards establishing a truly world class varsity renown throughout the world. However, many popular foreign dignitaries that may have indirectly contributed to scientific research advancement for Malaysia has not been respected, perhaps forgotten. Malaysian varsity needs to strive in order to achieve among one of the top 100 world’s best universities in the world as vision. This may be the task of Yang di-Pertuan Agong or King for the Federation of Malaysia to provide the honorary degree to the correct persons that assist Malaysia to foster close ties with foreign research institutes that may bring Malaysian research famous throughout the world, in accordance to Malaysian Act 30, First Schedule Section 4(2).

University and University Colleges Act 1971 (Malaysian Act 30), First Schedule section 47 (Part VI : General Provision, Admission of students) - A student shall not be admitted to the University to a course of study for a degree unless he shall have satisfied such requirements as may be prescribed by Rules.

There are in many situations where the exceptionally excellent students are being refused to study in a particular course or enrolled in postgraduate research studies for the unacceptable excuses of lack of suitable or insufficient placement within the university. Many universities in Malaysia are in fact breaching Malaysian Act 30, First Schedule section 47, continuously since Malaysia obtained independence in 1957. Such stern prosecution against defective
university administration should be conducted when maladministration occur within the varsity due potentially to discrimination on whatever reasons.

University and University Colleges Act 1971 (Malaysian Act 30), First Schedule section 53 (Part VI: General Provision, Deprivation of degree, etc., on grounds of misconduct) - (1) If any member of an Authority, or any graduate of the University, or any person who has received a degree, diploma, certificate or other academic distinction from the University, is convicted by a court of law of any heinous offence whether within or without Malaysia, or is in the opinion of the Board guilty of scandalous conduct, it shall be lawful for the Chancellor, on the recommendation of not less than two-thirds of all the members of the Board — … (b) to deprive him of any degree, diploma or other academic distinction conferred upon him by the University. (2) Scandalous conduct in subsection (1) includes wilfully giving any staff, officer, employee or Authority of the University any information or document which is false or misleading in any material particular in obtaining a degree, diploma, certificate or other academic distinction from the University.

A lot of serious criminals, especially of white-collar nature, are conducted by those professionals possessing university qualification that could happen inside or outside Malaysia. That may be unfair for intelligent convicts to be deprived of university qualification that has been awarded to them even for heinous acts that are not related to their university study. That means the recommendation of not less than two-thirds of all the members of the Board of Directors of the University to the Chancellor, as a higher education institution, to deprive the academic qualification, even for minor breach of laws but deemed as heinous to certain party, or any serious offences occurred after graduation but have no connection with university study, may be deemed inappropriate and unfair to the convicts, in order to prevent abuse of power of any people especially those influential to the decision of Chancellor, that may threaten the rights of the convicts that latter be accused for applying university qualification and knowledge learnt in tertiary college to commit such heinous acts not derived from any tertiary study experience, when implementing University and University Colleges Act 1971 (Malaysian Act 30), First Schedule section 53. The term “Authority”, that is defined in Malaysian Act 30, Section 2 (First Schedule – Interpretation), may be the party susceptible to abuse of power while implementing such legislation.

SECTION TWO: EDUCATIONAL INSTITUTIONS (DISCIPLINE) ACT 1976 (MALAYSIAN ACT 174)

Educational Institutions (Discipline) Act 1976 (Malaysian Act 174), section 9 (Part III: The Students’ Representative Committee and Other Student Bodies) - (1) The Minister or the Executive Head may, in his absolute discretion, without assigning any reason therefor, suspend or dissolve the SRC or any student body established under section 8, and give such consequential directions or instructions or take such consequential steps as may be necessary or expedient to give effect to the suspension or dissolution… (3) The suspension or dissolution of the SRC or a student body established under section 8 shall be final and no court shall have any jurisdiction to entertain any proceedings against such suspension or dissolution.
The provision of Malaysian Act 174, section 9(1) that simply allow the Minister - Minister of Education or Minister of Higher Education or Executive Head - the officer or member of the staff of the Institution who functions as the principal executive officer of the Institution, may expose the unprotected student organizations to abuse of power by certain top staffs members that has given authority to shut down the student organization registered under the institution, for any reasons but without giving any reasons, that may lead to lack of transparency in Malaysian administrative law. There should be some basis for the affected student organization to challenge for review of administrative decision, when Malaysia is a democratic nation that should always respect the viewpoint of everybody even the disliked dissidents if they contribute to institutional development with some form of memberships support. Furthermore, Malaysian Act 174, section 9(3) are deemed illegal and illogical when the legislation disallowed the law court, the judiciary body of the nation to make decision against suspension or dissolution of student bodies registered under any educational institutions in Malaysia, that has indirectly allowed the executive power of the Malaysian government to interfere with judiciary processes even if certain administrative procedures are not complied with.

Educational Institutions (Discipline) Act 1976 (Malaysian Act 174), section 10 (Part IV : Offences) - (1) No person, while he is a student of an Institution, shall be a member of, or shall in any manner associate with, any society, political party, trade union or any other organization, body or group of persons whatsoever, whether or not it is established under any law, whether it is in the Institution or outside the Institution, and whether it is in Malaysia or outside Malaysia, except as may be provided by or under this Act, or except as may be approved in advance in writing by the Minister… (5) Any person who contravenes or fails to comply with subsection (1), (2), (3) or (4) shall be guilty of an offence and shall, on conviction, be liable to a fine not exceeding one thousand ringgit or to imprisonment for a term not exceeding six months or to both such fine and imprisonment.

There is not possible for every minor organizational activity among students from Malaysian educational institutions, even of unimportant nature, to go through the Ministry of Education or Ministry of Higher Education Malaysia. It is also impractical for every delegate of the abovementioned ministries to provide formal approval letter for every student activity conducted in Malaysian educational institutions. In reality and with reference to the clear interpretation of Educational Institutions (Discipline) Act 1976 (Malaysian Act 174), section 10 (Part IV : Offences) (1) - (5), all of the students from Malaysian educational institutions may have to be fined at certain amount of money or imprisoned for certain duration or both for many different unregistered activities outside the control of their educational institutions in Malaysia while being students. Penalties are recommended to only those illegal activities contradictory to laws especially of criminal nature, inclusive of abusing the branded name of the educational institutions for many different activities unrelated to their formally approved educational program, whether within or extra-curricular nature, but not all activities involving any organization.

Educational Institutions (Discipline) Act 1976 (Malaysian Act 174), section 11 (Part IV : Offences) - (1) No student of an Institution, or any organization, body or group of students of an Institution, shall, in or outside the campus, or in or outside Malaysia, collect or attempt to collect, or promote or attempt to promote any collection of, or make any appeal orally or in
writing or otherwise, or attempt to make any such appeal for, any money or other property from any person, not being money or property due or about to fall due under or by virtue of any written law, contract or other legal obligation. (2) Any person who contravenes or fails to comply with subsection (1) shall be guilty of an offence and shall, on conviction, be liable to a fine not exceeding one thousand ringgit or to imprisonment for a term not exceeding six months or to both such fine and imprisonment.

The provision of Malaysian Act 174, section 11(1) that prohibited the money collection activities among the registered students in Malaysian educational institutions is not appropriate when every minor activity is not possible to go through the busy Minister of Education or Minister of Higher Education Malaysia. If such complicated procedures are truly required to control the financial support among students in Malaysian educational institutions for the illegal activities, then the relevant ministries of education must ensure that they are efficient enough in the administration up to world class standard and no bureaucratic policies or corruption happened within the governmental department that may have delayed the approval processes, however the reverse may sometimes be true. As long as the relevant students performed legal activities under their own name and initiatives without even abusing the name of their current educational institution, beyond the vicinity of their educational institutions, then the money collection activity may be allowed provided the faults that happened latter are due to the students themselves without involving their educational institutions. The application of penalty as in Malaysian Act 174, section 11(2) is recommended to be amended to cater only those illegal activities against the law, corruption and funding appropriation with intentional abuse of processes only, but not all money collection activities.

Educational Institutions (Discipline) Act 1976 (Malaysian Act 174), section 15 (Part IV : Offences) - (1) The Minister may, where upon representations made by any particular Institution, he is satisfied that it is desirable to do so in the interest of that Institution, order in writing that any student of an Institution be suspended from being a student thereof for such period as the Minister may specify in the order, or be expelled from it, and such student shall, immediately thereupon, be so suspended or expelled, as the case may be… (3) The Minister may give such decision with regard to any representations made under subsection (2) as he may deem fit and proper, and such decision shall be final.

In any form of administrative laws, there should be procedures to challenge the decision of the minister in the governmental department even in the Ministry of Education and Ministry of Higher Education Malaysia. Malaysian Act 174, section 15(3) is recommended to provide procedures to question the decision made by any minister in order to clarify further about the logic made behind any administrative decision. Such provision in view of Malaysian Act 174, section 15(1), may provide the opportunity for the appellant to obtain objective and fair viewpoints from parties not involved in the ministrial disputes in order to prevent abuse of power in the governmental ministries that may simply expel any student without significantly sound reasoning for certain improper administrative actions.

Educational Institutions (Discipline) Act 1976 (Malaysian Act 174), section 18 (Part V : Transitional) - (5) Any question as to whether the members of any society or co-operative society, as the case may be, are wholly or predominantly students of one or more Institutions
shall be decided by the Registrar of Societies or the relevant Registrar of Co-operative Societies, as the case may be, and his decision thereon shall be final and shall not be questioned or reviewed in any court.

The provision of Malaysian Act 174, section 18 that denied the rights of appeal against the decision of Registrar of Societies in any law court, should be amended for fairness consideration and prevent the abuse of power of the Registrar of Societies that may have awarded excessive power to act on behalf on the Malaysian government, where the decision-making process may also be influenced politically with prejudice and bias against unfavourable parties, whether intentionally or unintentionally. However, law court actions recommended should be emphasized as final resort to settle such disputes as related to any question of law.

Educational Institutions (Discipline) Act 1976 (Malaysian Act 174), section 26 (Part V : Transitional - This Act and subsidiary legislation made thereunder to prevail) - In the event of any inconsistency or conflict between the provisions of this Act or any subsidiary legislation made thereunder and the provisions of any other federal law or subsidiary legislation made thereunder relating to education or educational institutions or any particular educational institution, the provisions of this Act and the subsidiary legislation made thereunder shall prevail.

Malaysian Act 174, section 26 seemed to have privileges over other federal government legislations in Malaysia especially related to educational institutions, more superior than National Council on Higher Education Act 1996 (Malaysian Act 546), Universities and University Colleges Act 1971 (Malaysian Act 30), Education Act 1996 (Malaysian Act 550), Private Higher Educational Institutions Act 1996 (Malaysian Act 555) and even the Constitution of Malaysia. Then there exist non equivalent position of various Malaysian laws passed by the same federal parliament of Malaysia, and may cause confusion when the laws other than Malaysian Act 174, for example Act 546, Act 30, Act 550 and Act 555 did not mention clearly that Act 174 is more superior than them.

Educational Institutions (Discipline) Act 1976 (Malaysian Act 174), Second Schedule section 6 [ Educational Institutions (Discipline of Students) Rules 1976, Part II – General Discipline : Attire and appearance] - A student shall be decently or appropriately attired while attending lecture, tutorial, examination, class, workshop or while involving or attending any activity either inside or outside campus or while present in any part of the campus.

Malaysian Act 174, Second Schedule section 6 may require standard guidelines on the type of attire that should be worn by every student especially at tertiary educational institutions that may be varied among different management, and also to prevent unnecessary dispute raised in physical appearances. Some may prohibit jeans and shorts, whereas others may make headscarfs among Muslim women and haircuts below certain length compulsory. The term “appropriately attired” may be interpreted differently for different people as well.
The provision of Malaysian Act 174, Second Schedule section 9 consists of errors of law and is recommended to be amended with certain exemption clauses that allow certain gathering of more than 5 students to be held in the Malaysian educational institution. For example, it is not possible for every student gathering in a campus with more than 5 students to obtain prior permission from Executive Head unless special officer is typically assigned to deal with such bureaucratic procedures to register every student gathering held in the building of the related educational institution. Furthermore, student group picnic, coffee shop and canteen gathering for general leisure and recreational purposes in educational premises may not require any prior permission from any Executive Head when the park and canteen is open for business operation, unless the group gathering with more than 5 students are held in special room, field or any usually crowded public venue in the educational institution that need to be booked prior to the gathering in order to prevent clashes of venue usage and over-congestion. Such restriction may be effective against illegal activities but overemphasizing of such regulations may also contradictory to freedom of association among students, further nullifying Malaysian Act 174, Second Schedule section 9 that breaches human rights provision as stated in Constitution of Malaysia.

Educational Institutions (Discipline) Act 1976 (Malaysian Act 174), Second Schedule section 12 [Educational Institutions (Discipline of Students) Rules 1976, Part II – General Discipline : Publication, etc., of documents] - (1) No student, and no organization, body or group of students, shall publish, distribute or circulate any document within or without the campus: Provided that the Executive Head, or a person authorized by him in writing, may permit in writing the publication, distribution or circulation of a particular document for such purposes and subject to such restrictions, terms or conditions as the Executive Head or the person authorized by him as aforesaid may deem necessary or expedient to impose in granting such permission.

Educational Institutions (Discipline) Act 1976 (Malaysian Act 174), Second Schedule section 13 [Educational Institutions (Discipline of Students) Rules 1976, Part II – General Discipline : Student’s activities outside campus] - No student, and no organization, body or group of students, shall organize, carry out or participate in any activity outside the campus, except with the prior written permission of the Executive Head and in due compliance with any restriction, term or condition which the Executive Head may deem necessary or expedient to impose.

The provision of Malaysian Act 174, Second Schedule section 12(1) and Second Schedule section 13 may not be appropriate and unfair for the student especially those of mature above
or at 18 years old that need to bear their own responsibilities while involving in any activities outside the campus. Such provision for naive children below 18 years old may be effective to prevent them from being used by illegal organizations for any activities that exploit their interest. Control of every student activity outside the campus and school is not possible and beyond the rights of the educational authority, unless the name and representation of the related educational institutions are used as symbols and objective towards organizing such external student activities beyond the vicinity of their school. Malaysian Act 174, Second Schedule section 12(1) and Second Schedule section 13 may protect the related educational institution from being blamed for any wrongdoings and accidents happen among the students. However, the more effective remedy in order to prevent confusion of the legislations are compulsory permission must be obtained from the Executive Head of the educational institution for all formally registered activities of students but not any private student activities, where such responsibilities to control the action of the student belong to their parents and guardian if the students are below 18 years old or those dependent with certain disabilities, and for mature students of 18 years old and above, they need to take care of themselves outside the campus with assistance from police for all privately organized student activities without involving their educational institutions.

Educational Institutions (Discipline) Act 1976 (Malaysian Act 174), Second Schedule section 16 [ Educational Institutions (Discipline of Students) Rules 1976, Part II – General Discipline : Student’s objection to entry, exclusion, etc., of persons from campus ] - No student, and no organization, body or group of students, shall make any objection orally or in writing or in any other manner to the entry into, or the presence in, or the exclusion from, or the expulsion from, the campus of any person, body or group of persons.

Educational Institutions (Discipline) Act 1976 (Malaysian Act 174), Second Schedule section 17 [ Educational Institutions (Discipline of Students) Rules 1976, Part II – General Discipline : Gaming in campus ] - No student, and no organization, body or group of students, shall organize, manage, run or assist in organizing, managing or running, or participate in, any gaming, wagering, lottery or betting within the campus.

Educational Institutions (Discipline) Act 1976 (Malaysian Act 174), Second Schedule section 18 [ Educational Institutions (Discipline of Students) Rules 1976, Part II – General Discipline : Consumption or possession of liquor and drunkenness ] - (1) No student shall, within the campus, consume or have in his possession or under his custody or control any liquor.

Malaysian Act 174, Second Schedule section 16 - 18(1) consists of various provisions that breaches the student rights. The related educational institutions, under the Ministry of Education or Ministry of Higher Education Malaysia or both, have to respect the basic human rights of the students under their supervision but not unnecessarily restrict their conduct that are accepted by majority Malaysian and world community but unaccepted locally by just their educational institution that may have acted against the norm of the society but no the students. Malaysian Act 174, Second Schedule section 16 has directly denied the rights of the students to voice their opinion to make objection against unfair administrative decisions sometimes by the political educational authorities. Every opinion should be heard and justified, that may proceed with formal debate if disagreement exists between the students and their educational institutions. Such lengthy procedures of objection may deemed necessary for democratic Malaysian society that promote critical thinking and ability to
differentiate among their students, without any further illegal violent and destructive plots due to hidden but latter exploded dissatisfaction, rather than asking the students to shut up totally. There should be no prohibition allowed also for certain type of gaming, especially for welfare-based lottery, that already accepted under Malaysian law but unacceptable for students even above 17 years old, under Malaysian Act 174, Second Schedule section 17. The student participates in gaming should bear their own responsibility without causing trouble of debt to their educational institution. It is also recommended that fair betting is allowed among students if authorized by their educational institutions especially for fund-raising purpose but not for profit-making. Malaysian Act 174, Second Schedule section 18 is recommended for certain Muslim students and those students with certain religious practises that prohibit alcohol consumption only, and prohibit drunkenness among all students although consumption and possession at certain limit are recommended to be allowed, for example, around 100 millilitre per student at maximum per day especially those of healthy medicinal values but prohibited totally for those who drive or operating heavy and dangerous machinery inclusive of car and motorcycle.

Educational Institutions (Discipline) Act 1976 (Malaysian Act 174), Second Schedule section 23 [Educational Institutions (Discipline of Students) Rules 1976, Part II – General Discipline: Living or sleeping in the campus] - No student shall use or cause to be used any part of the campus or any part of any building within the campus as living or sleeping accommodation, except the accommodation provided for him in the hostel by the Institution.

The provision of Malaysian Act 174 Second Schedule section 23 may require update by addition of clause that allow living and sleeping in camp site to be allowed, that is not classified as hostel. If no such provision is provided, the educational institutions themselves may breach the legislation when allowing the campus venue to be utilized for legally approved student activities. If the legislation totally prohibit any camp to be set up inside campus, then the wastage of resources may occur when in fact the facility in the Malaysian educational institutions should be fully utilized for the maximum benefits of all staffs and students.

Educational Institutions (Discipline) Act 1976 (Malaysian Act 174), Second Schedule section 27 [Educational Institutions (Discipline of Students) Rules 1976, Part III – Hostel Discipline: Entering or remaining in a resident student’s room] - (1) No person shall enter or remain in a room occupied by a resident student except the resident student himself: … And provided further that this paragraph shall not be deemed to prohibit a student from entering the room of a resident of the same sex for a visit for a normal social purpose.

The provision of Malaysian Act 174 Second Schedule section 27(1) is recommended to be amended to allow visitor of opposite sex to enter or remain in a hostel room occupied by a student, where the opposite sex visitor may be the parents, relatives, guardians and good friends provided no sexual intercourse activities allowed inside certain college owned hostel. The original motive of the legislation may also not able to hinder the invasion of either homosexual nor bisexual visitors against the safety of the hostel resident even same sex visitors are allowed to enter the room.
Educational Institutions (Discipline) Act 1976 (Malaysian Act 174), Second Schedule section 33 [Educational Institutions (Discipline of Students) Rules 1976, Part III – Hostel Discipline : Resident student to vacate or transfer residence on being required by Institution ] - (1) A resident student resides in a hostel at the absolute discretion and pleasure of the Institution. (2) The Institution may require a resident student to vacate his residence or to transfer his residence to a different accommodation provided by the Institution at any time without assigning any reason.

For profit-making educational institutions in Malaysia especially those possessing profit-making nature and charging high cost for high class, quality and standard accommodation, where the hostel is liked a hotel, Malaysian Act 174 Second Schedule section 33 may be unfair for the part of residing student as a consumer rather than a welfare-assisted subsidized resident. The educational institution must also follow Contract Act 1950 and other legislation of Malaysia but not act according to the “absolute discretion and pleasure of the Institution”. Sound reasons may need to be provided to the resident under special request by the educational institution but not simply ignore the customer who is also the resident of the hostel, where the term “without assigning any reason” should be forbidden in Malaysian Act 174.

Educational Institutions (Discipline) Act 1976 (Malaysian Act 174), Third Schedule section 1 (Students’ Representative Committee : Election of SRC) - (1) The students of an Institution shall elect a Students’ Representative Committee in the following manner : - (a) in the case of an Institution providing a course of study only in one particular field extending over a period of years, the students of each particular year shall elect by secret ballot, conducted by the Students’ Affairs Officer, such uniform number of students studying in the respective year to be representatives in the SRC as may be determined by the Executive Head. Although election is deemed necessary for a democratic polity that award voting power for members to selected their own desired leader to manage an organization, there shall be no prohibition to use alternative methods to conduct such democratic processes. There are many way to conduct election, some via open of hand rising or display of proof of support to certain leaders and other may opt to be silent on their choice. However, the provision of Malaysian Act 174 Third Schedule section 1(1)(a) just allow secret ballot to choose Students’ Representative Committee, that is recommended to alter as in the following section 1(1)(b) that allow also use alternative methods to choose their representatives.

Educational Institutions (Discipline) Act 1976 (Malaysian Act 174), Third Schedule section 13 (Students’ Representative Committee : Disputes as to elections) - If any dispute arises as to whether any member or office-bearer of the SRC or of an ad hoc committee of the SRC has been duly elected or appointed, as the case may be, or is entitled to be or to remain a member or office-bearer thereof, the dispute shall be decided by the Executive Head or by a person appointed by him for the purpose, and the decision thereon of the Executive Head or of such person shall be final.

According to Educational Institutions (Discipline) Act 1976 (Malaysian Act 174), section 2 (Part I : Preliminary – Interpretation) - “Executive Head” means the officer or member of the staff of the Institution who functions as the principal executive officer of the Institution.
Such Executive Head is a principal or headmaster in primary or secondary school, or Vice Chancellor and Chief Executive Officer for university of tertiary college in Malaysia. The provision of Malaysian Act 174 Third Schedule section 13 that denied the rights of the aggrieved to appeal to Minister of Education or Ministry of Higher Education or law court in Malaysia by having the word “decision... shall be final” may not be correct and should be deleted when vertical appellant pathways are available towards the superior of the Executive Head.

SECTION THREE : EDUCATION ACT 1996 (MALAYSIAN ACT 550)

Education Act 1996 (Malaysian Act 550), section 2 (Part I – Preliminary) - In this Act, unless the context otherwise requires — … “national school” means a government or government-aided primary school — … (d) in which facilities for the teaching of — (i) the Chinese or Tamil language shall be made available if the parents of at least fifteen pupils in the school so request; (ii) indigenous languages shall be made available if it is reasonable and practicable so to do and if the parents of at least fifteen pupils in the school so request.

The provision of Malaysian Act 550 section 2 is recommended to cover not only Chinese, Tamil and indigenous languages but for all languages available in the world, in the interpretation of “national school”, provided that Malaysian Malay and English languages are made compulsory to every related student, when Malaysia is moving towards modernization and globalization where some other languages, for example, Arabic, French, Japanese and other international languages are requested by at least fifteen parents. The English language of higher level and equivalent to British and American standard at the same year level should also be provided wherever there are request, in addition to Malaysian English subject. Such provision is given in the definition of “national secondary school” and it is also suggested for national primary school.

Education Act 1996 (Malaysian Act 550), section 2 (Part I – Preliminary) - In this Act, unless the context otherwise requires — … “national secondary school” means a government or government-aided secondary school — (a) providing a five-year course of secondary education appropriate for pupils who have just completed primary education… “secondary education” means education comprising lower secondary and upper secondary education.

The length of free secondary education for Malaysian government school is recommended not only limited to five years, normally until Secondary Form 5 as defined in Education Act 1996 (Malaysian Act 550), section 2, but should also include post secondary education particularly at Secondary Form 6. That means all students are welcome to further their education up to Secondary Form 6, usually called pre-university, but not only limited to Secondary Form 5, whether the students passed or failed in Malaysian Certificate of Education (SPM – Sijil Pelajaran Malaysia). If such suggestion is accepted then “secondary education” should include “lower secondary” (Secondary Form 1 – 2), “middle secondary” (Secondary Form 3 – 4) and “upper secondary” (Secondary Form 5 – 6).
Education Act 1996 (Malaysian Act 550), section 32 : Transition Class (Part IV – National Education System, Chapter 4—Secondary Education) - The Minister may provide for a transition class in any academic national secondary school.

“Transition class” has not been defined clearly in Malaysian Act 550, section 32, and it may be a question whether Minister of Education Malaysia could approve different types of “transition class” for all secondary students at low or negligible fees, when there is a financial limitation to execute the proposal. Usually understood “transition class” is Remove Class before Secondary Form One after completion of primary education, mainly strengthening Malaysian national language or Malay language. Other forms of transition class are suggested to be held after Secondary Form 5 to assist those failing especially the Malay language and other key subjects at Malaysian Certificate of Education (MCE) [Sijil Pelajaran Malaysia (SPM)] or O-level equivalent to pass, using the vacated school building in the daytime of weekends and school holidays to improve themselves. English language at international level equivalent to Singaporean or United Kingdom (UK) standard may be another option for the proposed “transition class” program.

Education Act 1996 (Malaysian Act 550), section 50 : Teaching of the Islamic religion (Part IV – National Education System, Chapter 10 — Secondary Education) - (1) Where in an educational institution there are five or more pupils professing the Islamic religion, such pupils shall be given religious teaching in Islam by teachers approved by the State Authority.

The minimum number of students required to open a religious study class is recommended to be fifteen instead of five, provided that the parent or guardian of the students request so, in order to be consistent with the language learning of Chinese Mandarin, Indian Tamil and native languages in primary and secondary schools under Malaysian national education system as stated in Malaysian Act 550 section 2 for the definition of “national school” and “national secondary school”. Minimum numbers of students should be the same for both additional religious and language studies if less than fifteen. Furthermore, the provision of Malaysian Act 550 section 50 should not be limited to Islamic religion but for all other major religion in the worlds, inclusive of Christianity professed by some tribes of Sabah and Sarawak, Buddhism, Hinduism, Sikhism etc, when Malaysia is composed of multicultural and multiethnic groups with diversified religious faith and tradition. Such measures may save the cost of moral and religious education, where it may be deemed not compulsory but optional in national education system when there is no direct evidences proven to Malaysian public that those students doing well in moral or religious studies under Malaysian national education system could have better ethics than those students learning foreign non-Malaysian educational syllabus, where in reality the reverse situation may be true sometimes. Malaysian Act 550 section 50 may be used to force the Muslim students to study Islamic religion even when they dislike religious studies or if they are more interested in other professional subjects where such exemption from Islamic studies may be recommended if the affected Muslim students opted other modern languages or professional and technical subjects as substitutes for the Islamic studies, or moral education for non-Muslim as well, saving the effort of school as well that may be avoided from punishment for not being able to provide Islamic religious studies for 5 or more Muslim students in the same school.
Education Act 1996 (Malaysian Act 550), section 75: Subjects to be taught in private educational institutions providing post-secondary education (Part VII – Private Educational Institution) - (1) The Minister may require a private educational institution providing post-secondary education to teach the following subjects: (a) the national language, where the medium of instruction is other than the national language; (b) Malaysian studies; (c) the English language, where the medium of instruction is other than the English language; (d) studies relating to Islamic education for pupils professing the Islamic religion; and (e) moral education for pupils not professing the Islamic religion, based on the prescribed curriculum.

The cost of post-secondary private education in Malaysia is usually high in comparison to those polytechnics sponsored by the Malaysian government. The learning of the subjects like Malaysian national language of Malay, English language, Islamic studies and moral education may not be necessary and may increase further the financial burden of the students of private polytechnics in Malaysia if not related to their professional studies, although such abovementioned subjects may assist the students to gain extra bonus marks for their course, that may be approved by the Ministry of (Higher) Education Malaysia that directed the private tertiary colleges to do so, but may not be necessarily accredited by professional organizations that calculated the load of studies based only on professional subjects related to the title and the level of the relevant course before recognizing the diploma or certificate to be equivalent to the professional standards of other more well-established countries, namely those in Singapore, Australia and United Kingdom. Malaysian Act 550 section 75 is recommended to set Islamic studies, moral education and Malaysian studies as optional subjects instead of compulsory, and compulsory Malaysian Malay and English languages equivalent to the level of Ordinary O level for English Language in Singapore and United Kingdom, and Malaysian Certificate of Education (MCE) [ Sijil Pelajaran Malaysia (SPM) ] for Malay language in Malaysia, only for those students pursuing certain course of studies where such language is necessary to understand the professional studies, but not for all students even if they posses good results in such language subjects in their secondary studies, and attendance to such English or Malay language courses may be optional as self-improvement or revision for those who already have adequate skills in such languages based on the results of the previous secondary school studies. However, the basic Malay and English languages should be taught also as options, even not relevant to their core course of studies, to assist those students followed foreign non-Malaysian secondary educational syllabus to be able to communicate with Malaysian society where the students are living together, where the components of Malaysian studies could be included as well as part of the basic optional modern language subjects of Malay and English languages. Legal studies relevant directly to their respective professionalism that could be approved by both Ministry of (Higher) Education Malaysian and professional accreditation bodies as core subjects, are recommended to be options equivalent to those moral education and religious studies, although those do well in law, moral education and Islamic religious studies do not necessarily guarantee that the students may possess higher professional ethics than others who did not study or do well in the subjects in the practical life.

Education Act 1996 (Malaysian Act 550), section 84: Refusal to register an educational institution (Part VIII – Registration of Educational Institutions, Chapter 1 – Registration of Educational Institutions) - The Registrar General may refuse to register an educational institution if he is satisfied — … (d) that existing educational facilities are already adequate in the area in which it is proposed to open the educational institution.
Malaysian Act 550 section 84(d) may not be an appropriate reason to refuse the registration of an educational institution because it is impossible for any area throughout the world to have adequate educational facilities inclusive of those in Malaysia. Such refusal may give wrong impression to the public where such decision may be affected by competitors of the existing educational institutions in such area that intentionally retard the successful registration. However, the Registrar General may need to remind the applicant of such registration that harsh competition is in the area in order to get sufficient number of students for sustenance, though beneficial competition is good in the improvement of educational services over other nearby counterparts.

Education Act 1996 (Malaysian Act 550), section 90: Grounds of refusal to register a governor or employee (Part VIII – Registration of Educational Institutions, Chapter 3 – Registration of Educational Institutions) - (1) The Registrar General may refuse to register a person as a governor or employee of an educational institution if — … (d) the person is not a citizen of Malaysia. (2) The Registrar General shall refuse to register a person who is under the age of eighteen years as a governor.

Those non-Malaysians who possess permanent resident status and certain special working to Malaysia should be allowed to register themselves in educational institutions in Malaysia, when many foreign non-Malaysian visiting professors, international English language teachers and staff members with Malaysian spouse are servicing throughout Malaysia. Malaysian Act 550 section 90(d) is recommended to include such working groups. If such educational institution is inherited lawfully especially those operated on private basis, then there should be no age discrimination for those under-aged children below 18 years to act as governor for the entity provided the guardian may act on their behalf until the child reaches 18 years old. Malaysian Act 550 section 90(2) is suggested to alter to meet such special circumstances.

SECTION FOUR: OTHER MALAYSIAN EDUCATIONAL LEGISLATIONS

Private Higher Education Institutions Act 1996 (Malaysian Act 555), section 43 (1) (Compulsory subjects) - All private higher educational institutions shall teach the following subjects: (a) Malaysian studies; (b) studies related to the teaching of Islamic religion for students professing the Islamic religion; and (c) moral education for non-Muslim students.

Section 41 (medium of instruction) - (1) All private higher educational institutions shall conduct its courses of study in the national (Malay) language... (3) Notwithstanding subsection (1), the private higher educational institution may, with the approval of the Minister - (a) conduct a course of study or a substantial part of a course of study in the English language, or conduct the teaching of Islamic religion in Arabic.

The abovementioned Private Higher Education Institutions Act 1996 (Malaysian Act 555), section 41 and section 43 constitute probable retard of Malaysian higher education towards world class standard where the Malaysian government tried to impose unnecessary outdated policies to interfere with the private education development. The core subjects of professional studies, namely law, engineering, accountancy, medicine etc should be the major focus, whereas others unrelated should be classified as elective subjects.
National Council on Higher Education Act 1996 (Malaysian Act 546), section 11: Termination of Appointment - The Minister may terminate the appointment of any member of the Council appointed under paragraph 4(g), (h) or (i) at any time WITHOUT ASSIGNING ANY REASON therefor. Section 4: Members of the Council - The Council shall consist of the following members: ... (g) three Vice-Chancellors of any of the Universities and University Colleges established under the Universities and University Colleges Act 1971 (Malaysia); (h) not more than two persons who are the chief executive officers of any private higher education institution; and (i) not more than three persons who, because of their knowledge and experience, would in the opinion of the Minister be assistance of the Council. Section 2: Interpretation... “Council” means the National Council of Higher Education established... “Minister” means the Minister responsible for education.

The provision under National Council on Higher Education Act 1996 (Malaysian Act 546), section 11 that allow termination of appointment without good reasons could be contradictory to employment law and basic human rights. Such provision to disallow judicial review in Malaysian government decision could be vague and generate no meaning in part of executive government. The act of parliament should also be precise and contain no ambiguity, where such provision to prohibit administrative appeal could be impossible in Malaysian society that demands clear and logical explanation with sound reasoning. Reasons of termination could be referred to section 12 of the Malaysian Act 546: Functions of Council if the committee could not perform the function properly.


When compared to higher education sectors in other more advanced nations and Asian counterparts like Japan, Hong Kong and Singapore, the quality of higher education that could be provided by institutions of higher learning in Malaysia is very uncompetitive especially in the postgraduate research education at Master and PhD postgraduate levels, the key element of national reformation and reinvention. Under Malaysian Act 546, the Malaysian National Council on Higher Education in fact should be responsible for defective Malaysian university administration when such tasks are under the provision of section 12 in Malaysian Act 546.

National Council on Higher Education Act 1996 (Malaysian Act 546) section 4 (Part II: National Council on Higher Education, Members of the Council): The Council shall consist of the following members: (a) the Minister as Chairman; (b) the Secretary General of the Minister of Education or his representative; (c) the Director General of Education or his representative; (d) the Secretary General of the Minister of Finance or his representative; (e) the Director General of the Economic Planning Unit of the Prime Minister’s Department or his representative; (f) the Attorney General or his representative; (g) three Vice-Chancellors of any of the Universities and University Colleges established under the Universities and University Colleges Act 1971; (h) not more than two persons who are the chief executive officers of any private higher educational institution, and (i) not more than three persons who,
because of their knowledge and experience, would in the opinion of the Minister be of assistance to the Council.


National Council on Higher Education Act 1996 (Malaysian Act 546) section 11 (Part II: National Council on Higher Education, Termination of appointment) - The Minister may terminate the appointment of any member of the Council appointed under paragraph 4(g), (h) or (i) at anytime without assigning any reason therefor.

The provision under National Council on Higher Education Act 1996 (Malaysian Act 546) is significantly politically-influenced Council that make the decision and determine the future direction of higher education sectors in Malaysia that inclined towards limiting the power of the public and private universities’ representatives by limiting the number allowed in the Council irrationally under section 4(g) and section 4(h) of Malaysian Act 546, where in fact there should be unlimited placement available to welcome all university and tertiary college representatives to take part in the honourable nation-building decision-making processes. Furthermore, it was ridiculous for the provision of section 11 of Malaysian Act 546 that slashes the power of the tertiary educational sectors professionals that allow the Minister of Higher Education Malaysia to fire the university representatives anytime without any reasons, contradictory to any form of administrative and human rights laws in the world, but no such biased provision is available for political representatives from Malaysian government departments as in section 4(a) - (f) of Malaysian Act 546.

Private Higher Educational Institutions Act 1996 (Malaysian Act 555), section 98 (Part XVII: Saving and Transitional Provisions) - Power of Minister to make additional transitional provisions: (1) The Minister may, by rules, make such provision as he considers necessary or expedient for the purpose of removing any difficulties occasioned by the application of this Act on private higher educational institutions... (2) The power of the Minister under subsection (1) shall include power to make such modifications so as to give effect to the provisions of this Act.

The definition of “Minister” is not provided in section 2 of Malaysian Act 555, Part I: Preliminary, Interpretation. In this circumstances the Minister is assumed to be Minister of Higher Education Malaysia. The provision of Malaysian Act 555, section 98(1) and section 98(2) may allow the Minister of Higher Education Malaysia to override the existing Malaysian law, that may also lead to abuse of power by certain politicians that have very influential power to act above the law regardless of various prescribed provision under the Malaysian Act 555. If difficulties are encountered while trying to execute the law then amendments should be made to the impractical sections with the consent of the majority of the members from Federal Parliament of Malaysia, even at the transitional period. Simply change the law by independent Ministry of Higher Education Malaysia may be illegal and inappropriate that may expose certain private institutions of higher learning Malaysia to potential unfair dealings and policies of Malaysian government that may act on political rather than professional education inclinations and motives. Malaysian Act 555, section 44 is related to the minimum standard to be met before certificates, diplomas or degrees can be awarded, described in Part II: Conduct of courses of study at private higher educational
institutions. There are two bodies that confer the accreditation – Ministry of Higher Education Malaysia and professional bodies. However, there is no protection against the faulty private and even public university education provider that conducts tertiary courses at low standard unsatisfactorily below professional requirement even the courses offered are approved by the Minister of Higher Education Malaysia, leading to the situation where the diploma and degree awarded by Malaysian universities may not be competitive enough to meet world class standard.

SECTION FIVE: HUMAN RIGHTS LEGISLATIONS FOR MALAYSIAN SOCIETY


Malaysian government is against The International Convention on the Elimination of All Forms of Racial Discrimination, when the racial imbalance in the high government position, like Prime Minister and Deputy Prime Ministers, university Vice Chancellor, directors of government statutory bodies, chief ministers of states etc are fully or mostly dominated by Bumiputra natives. Other presumed migrant races, like Chinese and Indians, and non-Muslim races mainly from Borneo states, are just followers without realizing the rights of their ethnics have been breached, but merely kept silent in order to protect themselves first in the racist public sectors in Malaysia.

In Reference: Reicher, H. (ed) (1995), “Australian International Law - Cases and Materials”, The Law Book Company Ltd t/as IBC Information Services, Australia, page 656: “The International Convention on the Elimination of All Forms of Racial Discrimination was adopted by the (United Nations) General Assembly in 1966 and entered into force in 1969. The Convention defines racial discrimination as: “any distinction, exclusion, restriction or preference based on race, colour, descent, or national or ethnic origin which has the purpose or effect of nullifying or impairing the recognition, enjoyment or exercise, on an equal footing, of human rights and fundamental freedoms in the political, economic, social, cultural or any other field of public life” : Article 1. It also mentioned that “The (International) Convention (on the Elimination of All Forms of Racial Discrimination) requires that parties ‘amend, rescind or nullify any law, which have the purpose of nullifying or impairing the recognition, enjoyment or exercise, on an equal footing, etc’ and to ‘prohibit and bring to an end, by all appropriate means, including legislation as required by circumstances, racial discrimination by any persons, group or organization’ ” : Article 2.

The racially discriminative policies in Malaysia were notorious not only among Malaysian government officers but throughout the world. However, not even one political party in Malaysia, whether ruling or opposition, able to create a hundred percent fair society without discrimination as defined in Article 1 of the Convention. Every race fight the rights for their own ethnic rather than considering other ethnic in Malaysia, with avoidance of breaching Article 2 of the Convention will never be possible. Convention here is: International Convention on the Elimination of All Forms of Racial Discrimination.
Human Rights Commission of Malaysia Act 1999 (Malaysian Act 597), contain merely 23 legal sections with 5 parts : Part I : Preliminary (section 1 - 2), Part II : Establishment of the human rights commission of Malaysia (section 3 - 11), Part III : Powers of inquiry of the Commission (section 12 - 15), Part IV : State of the Commission (section 16 - 18) and Part V : General (section 19 - 23). The protection against human rights breaches and anti-discrimination legislations in Malaysia has also deemed not completely drafted according to international laws, namely with reference to the provisions under United Nations International Convention on the Protection of the Rights of All Migrant Workers and Members of Their Families, United Nations Convention of the Recognition and Enforcement of Foreign Arbitral Award, United Nations International Covenant on the Civil and Political Rights etc approved by United Nations High Commissioner for Human Rights. Unlike those advanced nations of Australia and Britain, there has not been any specific antidiscrimination legislations in Malaysia on the ground of sex, age, race, disabilities, political believes etc. So how the Human Rights Commission of Malaysia could execute the function properly when no power has been given to exercise its jurisdiction under Human Rights Commission of Malaysia Act 1999 (Malaysian Act 597), section 4 : Functions and power of the Commission… (2) For the purpose of discharging its functions, the Commission may exercise any or all of the following powers : … (c) to study and verify any infringement of human rights in accordance with the provision of this Act.

International Convention on Civil Political Rights 1966, Article 38 : Every member of the Committee shall, before taking up his duties, make a solemn declaration in open committee that he will perform his functions impartially and conscientiously. As implied under Article 38, it is unlawful for a public authority to act in a way that is incompatible with a human right or, in making a decision, to fail to give proper consideration to a relevant human right.

Malaysian government has not signed nor ratified International Convention on Civil Political Rights 1966. International Convention on Civil Political Rights 1966, Article 38 prohibited the public authority in signatory and ratified nations to conduct the discriminative acts on the public service. For the absolute fairness of Malaysian government administration, all levels of public administration, from highest towards lowest positions, should consist on balanced racial distribution with special effort placed to attract qualified representations of certain racial group to fill in the appropriate Malaysian governmental department vacancies, which is ideally possible to be done but may have proven difficult to achieve in actual political situations dominated by native Malay origin that claimed themselves to be the original owner of the nation regardless of human rights of other ethnics with equivalent residency status and qualification when applying for jobs in Malaysian public service. Private sectors may follow the trend of public sectors that open the vacancy fairly if racial discrimination in employment extinguished in Malaysian society. It may be a question for Malaysian government to ratify the International Convention on Civil Political Rights 1966 if the federal Malaysian government representative signed the agreement, similar to the condition of China. See http://en.wikipedia.org/wiki/International_Covenant_on_Civil_and_Political_Rights, that is accessed on 16 August 2011.

SECTION SIX : MISCELLENOUS MALAYSIAN LAW

Industrial Relations Act 1967 (Malaysian Act 177), Part IX : Trade Disputes, Strikes and Lock-outs and Matters Arising Therefrom : Section 38 : Pupils not to take part in trade
disputes - (1) No pupil as defined in the Education Act 1961 (Act 63 of 1961), other than a lawful member of a trade union, shall – (a) do any act in contemplation or furtherance of a trade dispute… (2) The Minister of Education may, by notice in writing, require the governors or managers of any school to expel any pupil convicted or found guilty of an offence against this section and thereupon the governors and managers shall expel the pupil or cause him to be expelled accordingly.

The provision of Industrial Relations Act 1967 (Malaysian Act 177), section 38 will be very unfair to the pupil that maybe unfairly treated with low wages and ill treatment. Such provision is against human rights unless exemption clauses are added whether only the truly affected pupil of school may have rights to involve in the disputes. The written consent from parents or guardians may be needed if the aggrieved pupil is below 18 years old.

In Reference: Wu, R.; Zul-Kepli, M. Y. (2010), “Malaysian Communication and Multimedia Commission : A Model of Unified Communications Regulator for Hong Kong”, Malayan Law Journal (MLJ) Article Supplement, Malaysia, page cv : [2010] 2 MLJ March – April 2010, mentioned that: “Malaysian government could take also action under section 211 and section 233 of the CMA (Malaysian Communications and Multimedia Act 1999) against owners, operators or writers of websites who misuse the internet to spread slanderous comments, insulting the country’s leaders, religious sensitivities and race and those who break the law could be slapped with a (Ringgit Malaysia) RM50,000 fine, one year’s jail or both (The Star Newspaper in Malaysia on 22 October 2007).

The provision under Malaysian Communications and Multimedia Act 1999, section 211 and section 233 may be able to prevent defamations without justified evidence. However, there seemed no provisional penalties against the national leaders that retard the freedom of speech on mass media when the statement of claims are published together with supporting evidence, which is also against the Constitution of Malaysia. The Malaysian public should in fact be educated on the screening of information obtained online where the government placed insufficient effort in this aspect.


Constitution of Malaysia, Article 11(4) seemed to over-protect the rights of Muslims in Malaysia without even one legal statement that prevented the propagation of any new religion to non-Muslims. It may not be necessary to mention such redundant spiritual statement in the honorable Constitution of Malaysia when Islam did not tolerate apostasy, yet the Muslims were very tolerant against the fundamentalists that commit crimes and terrorism by abusing the holy name of Islam for war purposes.
Malaysian Act 163: Extra-territorial Offences Act 1976, Introduction - An act to deal with certain offences under written laws committed in any place without and beyond the limits of Malaysia and on the high seas on board any ship or on any aircraft registered in Malaysia or otherwise as if they were committed in Malaysia.

The extraterritorial effect of Malaysian Act 163 has been too narrowly interpreted and drafted. The law is recommended not only to cover the extra-territorial offences on ship or aircraft but should be widening to many other aspects in the era of globalization. The area of the law coverage should also be applicable to offences committed by or against Malaysian citizens outside Malaysia especially in human rights area, internet and telecommunication offences that may jeopardize the safety of Malaysians etc. Section 2(3) of the Act 163 in Malaysia should be applied when many Western advanced nations like United States of America (USA) and Australia have wider interpretation of their laws beyond national boundaries.

This part is related to inappropriate execution of Islamic law in Malaysia, leading the ex-British colonial into the backward Islamic states opposed by many non-Muslims and even the Muslim community themselves in the federal of Malaysia.


Although Malaysia is one of the leaders among the Islamic nations in the world, there is not even one extra-territorial act of Malaysia that could counter the false Islamic teachings and terrorism among Malaysian Muslims that engaged in the Islamic militant activities outside Malaysia, nor any proper syariah laws that make Muslim compulsory to condemn the political and military activities that abuse and misuse the Islamic doctrine throughout the world, leading to civil wars, poverty and mishaps among Muslims.

Federal Constitution of Malaysia, Article 11(4) provides: state law and in respect of the federal territories of Kuala Lumpur, Labuan and Putrajaya, federal law may control or restrict the propagation of any religious doctrine or belief among persons professing the religion of Islam.
Many different state enactment of Malaysia also prohibit the sending or delivering the publications relating to any non-Islamic religion to a Muslim, or distributing any publication or any publicity material relating to non-Islamic religion to a Muslim. Such provision of Federal Constitution of Malaysia, article 11(4) could be impractical under the era of information technology and globalization where many non-Islamic philosophies could be easily obtained online via internet and electronic mail delivery. For equality of Malaysian community, there should also be restriction Muslim religious propagation to non-Muslims in Malaysia as well, where such constitutional provision has deemed obsolete, that may have undermined the religious talents of Malaysian Muslims, jeopardizing the basic human rights in religious freedom and indirectly discriminating against holy non-Muslim scriptures that contain the knowledge and talents of ancient civilization in the world, by classifying non-Muslim holy scriptures as if the pornography that should not be touched by Muslims, closing the mind of many Malaysian Muslims to new forms of philosophies of life that may provide better and more suitable forms of advancement particularly among Malay race.

In *Minister of Home Affairs, Malaysia & Anor v Jamaluddin Othman* [1989] 1 MLJ 418, the defendant was detained for planning to propagate Christianity among Malays. However, none of the Malaysian government officer has been detained for trying to label Malaysia as an Islamic state where in fact Malaysia is an ex-Western British colonial and secular nation, encouraging non-Muslims to leave their religions for Islam when selfish Islamic doctrine prohibited the followers to follow other non-Islamic religions. Under first part of Principle of Nation (“Rukun Negara”) of Malaysia, atheist has been ignored when many problems of the world have been caused by those who professes the said “holy” religions. Religious talent is not equal to emotional quotient (EQ), etiquette and morality in many real world situations.

Defamation Act 1957 (Malaysian Act 286), section 12 (Part : Qualified privilege of newspaper) - (1) Subject to the provisions of this section, the publication in a newspaper of any such report or other matter as mentioned in Part I of the Schedule of this Act shall be construed as protecting the publication of any blasphemous, seditious or indecent matter or of any matter the publication of which is prohibited by law, or of any matter which is not of public concern and the publication of which is not for the public benefit.

The freedom of speech is the basic rights provided under the Constitution of the Federation of Malaysia 1957. However, there are grey areas where argument arises about the parameter adopted by Malaysian government to determine whether the press has made a defamatory statement or not. There are various speeches and printed material that may be normal and usual at one aspect of viewpoint but may be indirectly defamatory and disfavouring certain parties. The provision under Malaysian Act 286, section 12(1) and section 12(3), maybe abused by certain parties to suppress freedom of speech among public in Malaysia, which is unconstitutional in Malaysia. The norms of social situations in Malaysia may be different from the Britain, where the Common Law is originated, and the differentiation of the borderline between defamatory and non-defamatory statements may be quite subjective. Any statement with published evidences available to all people regardless of official secret regulations, are non-defamatory if justified by majority people within the society. If the statements are merely rumours and lies, hurting the feeling and the reputation of the aggrieved without published evidences, then it is defamatory. For all cases of defamation, it may as well provide a transparent online search website that allows the public to vote in order
to determine any statement is defamatory or not with all material facts available for everybody to view, a form of freedom of speech recommended for Malaysian public rather than suppressing the human rights by detaining those dissidents. Let people choose themselves, to get objective viewpoints.

Conclusion: The small law project for commenting on various potential flaws in Malaysian acts may assist the government in the improvement of legal system by amending or deleting certain problematic clauses available in the written laws, if agreed by those legal professionals and those directly affected by the legislation. However, the recommendations and comments provided above may not necessarily be accepted by the authority but merely the personal private investigation of the matter arises.
CHAPTER 4 : ADMINISTRATIVE LAW

JOURNAL : CAUSES OF DISMISSAL IN UNIVERSITIES – STATE OF VICTORIA IN AUSTRALIA (MAY 2010)

University is a provider of higher education and research studies mainly for adult students to undergo the professional training. Unlike high school and primary educations, the complexity of political and human relationships, particular at the postgraduate levels – Master and PhD by research, was far more significant. Tremendous conflicts will be guaranteed to arise during the dismissal when the university administrators intentionally create adequate cause for termination out of minor infraction, whereas no action was even taken against clearly incompetent faculty staffs and research students. This may be attributed to the inclination of the administrator to look the other way against the tenured faculty members falling incompetence in their subjective perceptions rather than immediately remedy the situation before the dismissal procedure begin, regardless of the availability of adequate cause of removal against any faculty member who has exercised the basic human rights. [ Robert M McGee & Walter E Block, Academic Tenure : An Economic Critique, 14 MARV. J. L. & PUB. POL’Y 545 (1991) ] The “adequate cause for termination” is recommended to be clearly defined, to be precise enough in order to prevent abuse of power among certain partial university administrators that may apply the reasons as a pretense to fire the out-of-favour faculty members, where the concerns frequently induce litigation between the university members being dismissed and the institution, when adequate procedural due process has not been afforded. [ Brian G. Brooks : Adequate Cause for Dismissal : The Missing Element in Academic Freedom. Journal of College and University Law 1995. 22(2) : 331 – 335. ]

ADMINISTRATIVE HONESTY IN AUSTRALIAN UNIVERSITY

The university, as a tertiary educational institution, is an entity ruled by human beings that may be subjected to various forms of irregularities, faults and inconsistencies in the administrations. The pride of the university administrators is always assumed as not mistaken, perfect and wholesome, unquestionable by any subordinates as desired in order to maintain the political dominance in the varsity environment. In some universities, many administrators continued to classify their universities as “multicultural”, “pluralistic”, “tolerant” and “diverse” etc despite serious racial incidents occurred. [ Hernandez W : The Constitutional of Racially Restrictive Organizations within the University Setting. Journal of College and University Law 1994. 21(2) : 429 – 433. ] The credibility of such administrators, and the varsity of employment, is highly questionable, whether the management decisions may be made properly according to prescribed operating standard and procedures. It has also been agreed that the conflicting goals and miscommunication may create problems between students and administrators. The truth of internal management problems may not be revealed by the university key staffs, with typical conceal of the reasons behind any decision-making that may be influenced by the political and human factors with hidden discriminative motions whether originated from the perpetrators directly or indirectly. Superficial improvement of the diversity by supporting and facilitating constructive student activities in campus environment may not be sufficient when the administrative fairness are concerned in the human relationships inside the learnt community. (Richardson RC, Jr. et al : Improving State and Campus Environments for Quality and Diversity : A Self-Assessment. 1991; 3 – 4.) Reputation is very important for a university, but deniable by dishonest administrators. Poor departmental reputation may be source of embarrassment of institution,
drive away potential students and faculty, and diminish institutional prestige and status. Conversely, those with good reputation may influence foundation grants, enhance the standing and prestige of the college in the academic world, generate undergraduate and graduate applications, foster alumni pride and support etc. [Newman SA: At Work in the Marketplace of Ideas: Academic Freedom, the First Amendment, and Jeffries v Harleston. Journal of College and University Law 1995. 22(2): 309 – 310.] Human beings are born naturally with strength and weakness. When the university administrators announced their success to public via mass media, the criticism will always be followed by the opponents that viewed varsity management issues more critically and objectively.


Universities are political and educational governing bodies exposed to various forms of legal disputes. Training in basic law studies is a must for every university administrator that hold various positions, inclusive of research supervisors that sometime rule without complying to the existing legislations, perhaps due to lack of varsity experience in management. A common mistake was defamatory action conducted by the research superior that compensate the accused for nothing for wrongful dismissal based on invalid evidences. [See Goffer v Marbury, 956 F.2d 1045 (11th Cir. 1992) and Grossman v Smart, 807 F. Supp 1404 (C.D. Ill. 1992).] If the university was being complaint or sued by the graduate students for breaching institutional administrative contracts, then the investigators have the rights to obtain additional information from the university against various allegations of dissatisfaction against the university administrator. The university administrators were disallowed to object the formal investigation process conducted for tortuously interfering with the university administrative contract with the students. [See Brown Mackie College v Graham, 981 F.29 1149 (10th Cir. 1992).] Attorney, public prosecutor and complaint handling officers may also be sued by the university for interruptions and disturbances caused in routine management, then this is the reasons for investigators and visitors particularly from Ombudsman and various grievance handling organizations to settle the internal university disputes with various intentional hurdles and delays possessed by the respondent university.
HYPERTENSION AND SALT CONSUMPTION [1]

It has been proven in both human and animal experimentations that high sodium salt intake has led to high blood pressure. The impairment of renal handling of sodium appeared to affect the pathways towards chronic blood pressure elevation, with effects of high sodium intake having interrelationships to vascular tone, the rennin-angiotensin-aldosterone system activity and the sympathetic nervous system. [2] An example is the cellular processes of cation flux that operate in vascular smooth muscle cells when the sodium flux operating through intracellular calcium. The areas of anterior hypothalamus that regulate extracellular volume and thirst may also be involved particularly situated at the central portions of autonomic nervous system. One of the largest and most rigorous observational study of blood pressure and sodium, called INTERSALT, revealed an estimate of 9 to 10 mm Hg greater increase in systolic blood pressure per 100 mmol / 24 hour higher sodium excretion among the research participants of ages 25 - 55 selected from 32-country cross-sectional study with approximate total sample size of 10,079, located at 52 centres each with 200 people male and female. [3]

POTASSIUM EFFECTS AGAINST HYPERTENSION [4]

Unlike sodium, high potassium intake has long been known to exert antihypertensive effects. [5] Potassium depletion in diet in many research studies, inclusive of the reduction of ratio of potassium to sodium in urine of the samples, revealed the increased risk of the hypertension compared to the reversed normotensive group.

RELATIONSHIPS OF DIETARY PROTEIN AND HYPERTENSION

The dietary protein is found to possess beneficial effects against hypertension although subtle but not profound. [6] Mechanism of action that reduces blood pressure due to protein was hypothetical. However, one possible explanation is about the promotion of the sodium excretion when the protein metabolism and consumption increases. Such condition causes the cerebral lesions development due to high blood pressure. Another hypothesis may predict the beneficial role of dietary protein on vascular structure although the relationship with human stroke is remote. Negative correlation between blood pressure and dietary protein has also been proven although the effects of protein that induces hypertensive diseases were indirect. [7] Another study found negative correlation of systolic and diastolic blood pressure with urinary methyl histidine, a type of amino acid found primarily in animal protein with the assumption that the urinary excretion of methyl histidine is used as an index of animal protein intake. [8]

VEGETARIAN DIET AND THE BENEFICIAL EFFECTS AGAINST HYPERTENSION [9]
Some vegetarians are committed in religious activities that made them less susceptible to cardiovascular risk. [10] In comparison to omnivores and meat eaters, vegetarians have significantly lower level of blood pressures, even if the comparative groups disavow smoking, caffeine and alcohol. [11] When lean meat was added to vegetarian meals, the consumers possess higher blood pressure but reverse reaction is observed when a person shifted from omnivorous meal to vegetarians, signifying the direct relationships between vegetarians and lower blood pressures. Methods adopted at intervention studies for such comparisons could be performed by setting up control group that ate omnivorous diet for 14 weeks, with subjects ate an omnivorous diet for 2 weeks, then changed to a vegetarian diet for the first or second of two 6-week periods. [12]

RELATIONSHIPS OF STRESS AND HYPERTENSION [13]

There are various causes that have confirmed to contribute to the increment of blood pressures, namely (a) physical activity; (b) obesity increment; (c) active coping and increased mental effort to perform work and home life activities under time pressure and competition; (d) diet; (e) supportive ties reduction to the family and larger community. [14] Increasing adrenergic receptor activity may also increase the blood pressure among the high job strain individuals, when low control on the job and high work demand have been related to increased urinary epinephrin but not cortisol. [15] Those at a low socio-economic status dimension specificity, such as lack of control at home or at work and economic security, lower-status occupation, loss of family ties are to be more universal contributing causes of the increase in blood pressure.

EFFECTS OF CARBOHYDRATE ON HYPERTENSION [16]

This part discusses types of carbohydrates, namely fibre, complex carbohydrate, fructose and resistant starch and their effects on hypertension. Fructose is an excellent substitute of glucose for diabetic treatment. However, fructose may induce hyperuricaemia, hyperinsulinaemia and hyperlipidaemia that increase the cardiovascular risk. [17] Complex carbohydrate, resistant starch and fibre, that can be converted to each other, can prevent the adverse effects of fructose, sucrose and fructose-containing disaccharide, on lipid metabolism, adiposity and insulin resistance. Soluble fiber may also lower cholesterol levels. [18] Those food higher in fibre also has lower glycaemic index. Lower glycemic index could reduce the blood pressure, linking insulin and catecholamines as well. [19] Glycaemic index is used to measure the rise of blood glucose associated with a known carbohydrate quantity.

IONIC RELATIONSHIPS IN HYPERTENSION REGULATION [20]

Various ions in the blood, namely calcium, magnesium and potassium may cause metabolic disturbances, further serve as the determinant of blood pressure. Calcium serve as the contractor required in muscle, in the extracellular form. [21] Calcium also serve the role in the relaxation and stimulus contraction coupling, depends on the steady state activities of magnesium, hydrogen and potassium. Observation of the relationships between habitual levels of dietary sodium or potassium and blood pressures, according to certain population-
based literature, may be easily conducted when large number of research participants are involved. Recommended simplified procedures are the measurement of blood pressure, with several repetitions, in the sitting position using an automated device. Urine may be collected from research participants with data adjusted for 24 hours. Flame photometry may be used to measure the sodium and potassium levels. The simplified methodology, running quick survey to investigate the relationships of various ions and blood pressures, may be conducted within the budgetary constraints. Selection criteria for participation usually exclude those pregnant women and those on the treatment of hypertension. In order to perform valid statistical analysis on the data obtained, those sodium and potassium excretion values, perhaps due to incomplete urine collection, may be discarded if: \( Na > \text{or} = \lambda \) and \( K > \text{or} = (\lambda / \text{mean} \ Na) \times \text{mean} \ K. \) [22]

BLOOD MEASUREMENT INSTRUMENTATION LIMITATION [23]

Measurement of blood pressures, whether among children or adults, may be varied susceptible to man-made errors. This could be due to various factors, namely sphygmomanometer used. Season of the year, temperature, time and place of measurement, cuff bladder width and length, stethoscope head and placement, demographics and number of blood pressure technician, surrounding, number and frequency of blood pressure measurement, subject posture and arm position, choice of onset of fourth and fifth phase of Korotkoff sounds to define diastolic blood pressure, fasting or non-fasting state etc. From the variances of the values obtained in different situations as mentioned, the actual results to determine the situation of high blood pressure and comparison with each other in the values of blood pressure could be different sometimes. [24]

HOME OR SELF-MEASUREMENT OF BLOOD PRESSURE

It is easier for the patients to involve in self-monitoring in the blood pressure observation where actions may be taken immediately, if any abnormality in the values of blood pressure observed. Individual variability has been confirmed considerably in the blood pressure measurement recorded in the clinical and the home. Certain literature proves that self-measurement has very high accuracy as well. [25] Self-monitoring of blood pressure measurement could be obtained by patients, their relatives or friends, that allow detection of small average changes in blood pressure. However, certain studies found that self-measurement could be inaccurate as well. [26] Subjective bias could easily occur, and most devices available for self-measurement of blood pressure may not be validated adequately. Due to such limitations of self-measurement, only carefully selected patients could find the cheap blood pressure measuring techniques useful. Alternative methods other than home measurement is via ambulatory blood pressure measurement, that is more advanced and complicated than the former.

MODELING OF COST EFFECTIVE HYPERTENSION RESEARCH [27]

For new research consultancies, the hypertension research conducted may be modified in order to reduce unnecessary instrument usage, at the same time, able to produce new findings. In urine samples of research participants, the levels of sodium and potassium may
be determined using a biochemical analysis system. Mercury sphygmomanometer may be applied on research participants at selected times depending on the research requirement. Hospitalization of patients may be needed but not truly essential since extra accommodation cost may be spent to cover the cost of research participants and researchers. Sometimes the results produced may not be truly accurate when multiple parameters affecting the blood pressures involved even the controls are applied.

AMBULATORY BLOOD PRESSURE MONITOR - INVASIVENESS

Blood pressure may also be monitored over period of 24 hours or more. The recorder may be invasive, that has been used mainly in the study of the variability of blood pressure. [28] It could be applied for documenting the effects of antihypertensive medications. [29] The other type is non-invasive recorder, that may be categorized into continuous and intermittent type. The non-invasive recorders can be used for routine evaluation but less accurate.

BLOOD PRESSURE MEASUREMENT TECHNIQUES - A SIMPLIFIED SUMMARY [30]

There are various methods of blood pressure measurement techniques have been proposed, namely via Korokoff sound technique, oscillometric technique, ultrasound technique, volume-oscillometric technique, direct intraarterial recording of blood pressure, pulse transit time technique, wide band external pulse recording technique, finger cuff method of Penaz, arterial tonometry etc. Due to various methods applied, there may be slight variation of the blood pressure recordings obtained. The comparison may only be possible when only single set of similar instrumentation is applied throughout a series of similar experimentation. The simplest blood pressure measurement technique may just apply interarterial recording but the results may not be 100% accurate due to the factors like the progressive changes with an increase of pulse pressure and the maximum rate of rise, as the wave proceeds to the peripheral circulation, that affect the shape of the arterial pressure wave. [31] In special populations and circumstances, a blood pressure measurement instrument, that has been validated in middle age adult, may not work equally well where certain changes in the calibration procedures, cuff of blood pressure and conditions of blood pressure measurement may be needed, especially if such instrument is to be applied among infants and children, elderly subjects, obese subjects, plus those involved in exercise or pregnant. Various types of devices have also been available for measurement of blood pressure, namely the Finapres recorder, vita-stat recorder, monitors for clinical and laboratory measurement, Hawksley random zero sphygmomanometer, Jentow recorder, automatic and semiautomatic monitors for self-measurement of blood pressure, ambulatory blood pressure monitors, arm devices and finger devices. Validation procedures for blood pressure instrument may involve observer training, before use inter-device variability, in-use (field) phase, after-use inter-device variability, device validation and grading. [32]

OBESITY AND BLOOD PRESSURE MEASUREMENT [33]

In the measurement of blood pressure among obese subjects, cuff size adjustment in order to fit the arm circumference is required in order to avoid cuff artefact in obese patients. It is
also important to determine whether there is a true elevation of blood pressure during the evaluation of blood pressure in obese subjects. As other conventional blood pressure measuring methods, there are a number of ways to do so, namely by mean, systolic, diastolic, indirect, direct, anaesthetized, conscious and 24-h continuous, that may also differ in the variability. As precaution against the inconsistencies of measurement, such variability of biological origin may also be reduced by measuring repeatedly in order to ensure a more representative readings for individual samples. An average blood pressure value may also be derived from 24-hour continuous recording, but physiological control that affect the reading may also differ between night and day. Genetic blood pressure effects, that are related to obesity, are usually more obvious under awake conditions. Certain studies of blood pressure measurement on obese subject may also indicate the greater bias in the relationship of blood pressure to arm circumferences when using the regular cuff with typical sizes of around 12 x 23 cm, leading to overestimations of blood pressure in the moderate to very obese. [34]

After measuring arm circumference, it is possible to adjust the cuff size accordingly by referring to standardized values, containing the independent variable of arm circumference in centimetre (cm), systolic error in mm Hg using regular cuff of 12 cm, large cuff of 15 cm and thigh cuff of 18 cm.

EFFECTS OF POTASSIUM OR KALIUM ON HYPERTENSION - CONTROVERSIAL EVIDENCE [35]

It has been generally accepted that potassium has been able not only to reduce the incidence of hypertension but also stroke among human population. [36] This is also applicable in animals even in the absence of blood pressure effect. Diets that are high in potassium may also be effective against medical hypertrophy of the arterioles of the kidneys, hypertension, stroke, renal glomerular lesions, cardiac hypertrophy etc. Despite the protective effects of potassium proven among primitive populations that seldom develop hypertension by consuming food with low sodium and high potassium, controversy exists that indicates such large increases of potassium intake does not significantly associated with the increases in plasma potassium concentration. Very large increases of intake in potassium have been able to modestly reduce the blood pressure, where the protective effects of potassium could be hardly measurable. Another controversy is about the absence of accepted hypotheses to explain the protective effects of potassium. In other words, current existing investigations on the mechanism in the regulation of potassium concentration in blood plasma and the effects of the nutrient concentration on the hypertensive effects have not been well-studied. The current research to explain the potassium effects on hypertension may be targeted on the regulation of aldosterone, in the nephron, renin-angiotensin system etc that may have directly and indirectly affect the regulation of blood pressure.

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In Reference: Thomson, Simon (2006), “Dementia and Memory – A Handbook for Students and Professional”, Ashgate Publishing Limited, United Kingdom, page 107: “Chapter 9 – How to cope with Dementia – Medical Treatment of Dementia: Maintaining good physical health is important if the patient’s deterioration is to be slowed. Ensuring adequate nutrition and hydration, with vitamin minerals and iron supplements, if necessary, is important to the overall health of the patient, and allows the clinician or carer to make the best use of residual functions.”

In Reference: Thomson, Simon (2006), “Dementia and Memory – A Handbook for Students and Professional”, Ashgate Publishing Limited, United Kingdom, page 122: Psychological stress in caregivers – There is evidence that psychological stress adversely affects the immune system. In a study of 13 woman caring for demented relatives, subjects underwent a 3.5 milimeter punch biopsy wound. Healing was assessed by photography of the wound and the response to hydrogen peroxide. “Healing” in this method was defined as “no foaming” of the hydrogen peroxide. It was found that the carer’s wound healing took significantly longer than in controls (48.7 versus 39.3 days, p < 0.05). The authors found that peripheral-blood leucocytes for caregivers produced significantly less interleukin-1-beta mRNA in response to lipopolysaccharide stimulation than did controls’ cell. (Reference: Kiecott-glaser, J. K.; Marucha, P. K.; Malarkey, W. B.; Marcado, A. M. et al (1995), “Slowing of wound healing by psychological stress”, The Lancet, 346: 1, 194-6.)

Reference for Memory Assessment: Baddeley, A.; Kopelman, M.; Wilson, B. (2002), “The Handbook of Memory Disorders”, Second Edition, John Wiley and Son Ltd, United Kingdom, page 617. The reference stated that: There are a series of questions that can be applied to test the memory of the research participation samples that could be categorized into 2 major groups - (i) healthy control sample; (ii) dementia affected patients: (a) Does this person have an organic memory deficit? (b) Is there a difference in ability between recognition and recall tasks? (c) Is there a difference between verbal and visual memory ability? (d) To what extent are the memory problems due to language, perceptual or attention deficits? (e) How do these scores compare with people of the same age in the general population?

Standard Memory Test Expected to be Applied in the Experimentation - Reference: Wechsler, D. (1987), “The Wechsler Memory Scale-Revised, San Antonio, TX : Psychological Corporation; Wechsler Memory Scale III, San Antonio, TX : Psychological Corporation. Examples of psychometrically-influenced memory tests that are to be applied to all samples of research participants is revised Wechsler Memory Scale. The rationale behind standard memory tests is not solely based on statistical analysis, but such test development may also involve establishing procedures for norm collection from a representative population, scoring procedure development, administration and determination of the reliability and validity of the memory tests. Some memory tests may require consideration of qualitative aspects, such as personality, motivation, lifestyle, family support etc.

thalamic density and third ventricle enlargement, leading to thalamic lesions that have also been the factors of amnesia of Korsakoff’s syndrome and may also contribute to some of the neuropsychological deficits. (Martin PR, Adinoff B, Weingartner H, et al : Alcoholic organic brain disease : Nosology and pathophysiologic mechanisms. Prog. Neuropsychopharmacol. Biol. Psychiatry; 1986; 10 : 147 - 164.) Long term alcoholism may cause direct damage in both cortical and diencephalic regions of the forebrain, leading to more severe amnesia with additional insult in Korsakoff alcoholics affecting diencephalic structures. (Lishman WA : Alcohol and the brain. Br. J. Psychiatry. 1990; 156 : 635 - 644.) Demential symptoms among chronic alcoholics, for example, cerebral shrinkage on pneumoencephalograms, the presence of sulcal and ventricular enlargement are evidenced with the arrival of computerized tomography (CT) techniques of non-invasive nature that encourages more rigorous observation in brain structure. (Ron M, Anker W, Shaw GK, Lishman WA : Computerized tomography of the brain in chronic alcoholism. A survey and follow-up study. Brain; 1982; 105 : 497 - 514.)


Medication and Treatment against Behavioral Disturbance in Dementia - Various forms of biochemical have been able to at least reduce the undesired effects of dementia via oral medication mainly where the combined effects of food consumed with the medicines have proven to be effective. These medications could be classified mainly into 2 types – neuroleptics and non-neuroleptics. (Sneider LS, Sobin P: Treatments for psychiatric symptoms and behavioral disturbances in dementia. In: Burns A, Levy R: Dementia. Chapman and Hall medical, United Kingdom.) Moclobemide may be effective to treat dementia patients possess the depressive symptoms. (Lorsheid: Oral presentation at the International Psychogeriatric Association Meeting. Rome, Italy; August 1991.) Side effects like anticholinergic toxicity, movement disorders like Parkinsonism, akathisia, dystonias due to the consumption of neuroleptics. (Raskin A: Validation of a battery of tests designed to assess psychopathology in the elderly. In: Clinical and Pharmacological Studies in Psychiatric Disorders (eds Burrows GD et al); London; page 337 - 343.) Non-neuroleptics can also be sub-classified into anticonvulsants, benzodiazepines, anti-depressants and β-adrenergic blockers.

Sample Research Project of Dementia - A. Project Title: Relationships of Olive Oil and Palm Oil in Dementia Prevention. B. (i) Project Summary: It has been suggested that olive oil is beneficial to counteract Alzheimer’s diseases especially among elderly population in France (see Reference a). However, the Australian population studies may have different results about the effectiveness of the olive oil in the prevention of dementia due to diversified food consumption, living habits and culture. Alternative to olive oil, the palm oils usually produced in the equatorial regions of Malaysia and Indonesia, may posses certain unknown values in the treatment of dementia, that may need to be verified by following the procedures as set out in Reference b. Olive oils has also been proven to be effective against cancers and blood pressure diseases. See Reference c. Olive oils contains 70 – 80 % of monounsaturated fatty acids (MUFA) [ oleic acid (18 : 1 n-9) ] and 8 – 10 % polyunsaturated fatty acids (PUFA) (6 - 7% linoleic acid and 1 - 2% a-linolenic acid) with great variety depending on the production zone, climate, variety and stage of maturity of olives when collected, and also latitude. Such variability has also been observed in palm oil. For such purposes, comparative studies may be conducted to understand the effectiveness of both olive and palm oils, applying neuropsychological evaluation like 30-item Mini Mental State Examination (MMSE), Benton Visual Retention Test (BVRT), Isaacs Set Test (IST) etc. C. (i) Lay Summary: The objective of the project is to perform comparative cognitive tests for targeted population in Australia by adopting certain recommended methods as stated in Reference b. Persons recruited in the study had to be - (i) living in the cities or suburban in the state of Victoria in Australia, namely City of Greater Dandenong, Knox City, City of Casey, City of Maroondah and City of Monash. (ii) aged 65 years and over. Depending on the funding and volunteer availability, the targeted population of sample involved is expected to be 50 persons at initial stage. C. (ii) Implications: The project may be able to find out the effectiveness of olive oils and palm oils in the prevention of dementia for the situation specific for Australia. Truly fair research findings may be able to be conducted in the state of Victoria in Australia, to double-check the effects of olive oils and palm oils in the dementia prevention. The project may further proven the plants oils that have different consequences on selected Australian population, by applying both qualitative and quantitative techniques. C. (iii) Consumer involvement: Consumer of the olive oil may contribute themselves as a research participant. Olive oil, together with palm oil, may also be sponsored by the companies of the olefin products, forming themselves as a consumer and producers.
concurrently. Depending on the amount of funding obtained to recruit researchers and research participants, the initial proposed project directions may be conducted towards voluntary basis due to limitation of funding that may be provided by the sponsoring organizations. The consumer groups may involve olive oil group, palm oil group, combined olive oil and palm oil group plus none of the olive oil and palm oil group. For the situation of olive and palm oil consumption in Australia the effectiveness of the plant oils in the dementia prevention may be easily compared. D. (i) Aims of the project : The purposes of the project are to reverify the effectiveness of olive oil and palm oil in the dementia prevention, with specific case reference for the state of Victoria in Australia, and to confirm the true beneficial effects of the plant oils on the scientific views rather than commercial inclination. The project is to be done on fair basis without biased on any types of oils that may have beneficial and detrimental effects in the dementia prevention. D. (ii) Background : Various natural material namely derived from plant sources may be able to tackle the Alzheimer’s disease. However, the inconsistent findings and controversial in methodologies are frequently raised. The conflict of interests from the sources of funding, namely from plant oil production companies, may indirectly affect the results of published findings that are always inclined towards the favour of funding providers. Example of beneficial product against dementia is low fat dairy products. See Reference a. Olive oils, forming the essential component of Mediterranean meals, may have therapeutic effects against dementia observed among the traditional consumers of olive oil, with fewer cases of dementia problems. Mediterranean meals, with most are using olive oils, proven to be effective against three major diseases of human beings and important in geriatric research, where the rate of occurrence dementia, hypertension and breast cancers are comparatively low when observation about the indirect medicinal effects of olive oils, similar to the fish oils consumed by the Japanese, with low disease mortality rates in cancer and heart diseases, able to be protective against Alzheimer’s diseases. This is expected to be close to the findings in Australia. D. (iii) Research strategy : A brief food frequency questionnaire (FFQ) was administered at the baseline to assess the dietary habits from a broad food categories - (1) fish-including seafood; (2) milk and dairy products; (3) meat and poultry; (4) eggs; (5) raw fruits; (6) cereals - including bread and starches; (7) pulses; (8) raw vegetables; (9) cooked fruits or vegetables. Various forms of cognitive tests are to be performed as a part of new psychological evaluations. (a) The Isaacs Set Test (IST), consisting of generating words belonging to semantic categories in 30 s, measured mostly semantic verbal fluency abilities but also speed of verbal production. (b) Benton Visual Retention Test (BVRT), which evaluates immediate visual memory, consists in the presentation of a stimulus, and displaying a geometrical figure for 10 seconds after which individuals are asked to identify the initial figure among four possibilities. (c) 30-item Mini Mental State Examination (MMSE) was used as an index of global cognitive performance. See Reference d, Reference e and Reference f. D. (iv) (a) Crichton GE, Bryan J, Murphy KJ, Buckley J : Review of Dairy Consumption and Cognitive Performance in Adults : Findings and Methodological Issues. Dementia and Geriatric Cognitive Disorders October 2010, 30(4) : 352 - 361. (b) Barr C, Portet F, Carriere I, Akbaraly TN, Feart C, Gourlet V, Combe N, Barberger-gateau P, Ritchie K : Olive Oil and Cognition : Results from the Three City Study. Dementia and Geriatric Cognitive Disorders 2009; 28 : 357 - 364. (c) Psaltopoulou T, Naska A, Orfanos P, Trichopoulou A : Olive oil, the Mediterranean diet, and arterial blood pressure : the Greek Euporean prospective investigation into cancer and nutrition (EPIC) study. Am J Clin Nutr 2004; 80 : 1012 - 1018. (d) Solfrizzi V, D’ Introno A, Colacicco AM, Capurso C, Del Parigi A, Caparso S, Gadeleta A, Capurso A, Panza F : Dietary fatty acids intake : possible role in cognitive decline and dementia. Exp Gerontol 2005; 40 : 257 - 270. (e) Folsteinmn MF, Folstein SE, Ms Hugh PR : “Mini-mental state”. A
Introduction to NMR Spectroscopy - NMR or Nuclear Magnetic Resonance has the ability to elucidate molecular structures, study molecular dynamics, measure molecular properties and bulk properties of the medium, allow analysed samples to be used for further investigation, determine impurities, study molecular binding and screen potential drug candidates due to its non-invasive nature.

NMR could be used as online detector when coupling with liquid chromatography (LC), according to Watanabe and Niki [1], of which the sensitivity latter improved by the development of better solvent – suppression techniques, on-column sample pre-concentration, high field strength magnet and expanded flow cells.

NMR Microcoil - In NMR, the NMR is being applied to describe the active volume of 1 μL or less. The signal-to-noise (S / N) ratio, related to the sensitivity and detection limit, is defined as the ratio of NMR resonance height to root mean square (RMS) noise. The S / N per unit volume for solenoid coils with diameter greater than 100 μm is approximated by $S/N \propto \omega_b^{7/4}/dc$ [2] where $\omega_b$ is the Lamor frequency.

The sensitivity of microcoil probe could be described with a volume independent parameter known as mass sensitivity $(S_m) : S_m = (S/N) / (\text{mol} \ t^{1/2})$ where mol and t are number of moles within $V_{obs}$ and the acquisition time, respectively.

Electrophoretic Current – Induced and Flow Effects : Solenoid coils from the most mass sensitive RF coils with orthogonal orientation to the static magnetic field ($B_0$). The strength of this induced magnetic field ($B_i$) is $B_i = \mu_0iR / (2\pi R^2)$ where $\mu_0$ is the permeability constant, i is the electrophoretic current, R is the capillary i.d. and r is the radial distance [3].

In addition to induced magnetic field, the different migration rate can greatly influence the NMR signal intensity and line width. Under static conditions, the effective longitudinal ($T_{1\text{eff}}$) and transverse relaxation ($T_{2\text{eff}}$) times of NMR nuclei in a flow system can be related to the residence time of the analyte (τ) in the detector and relaxation times ($T_1$, $T_2$) under static conditions [4] : $1 / T_{1\text{eff}} = 1 / T_1 + 1 / \tau$ and $1 / T_{2\text{eff}} = 1 / T_2 + 1 / \tau$.

Applications of CE / CEC-NMR - Capillary electrophoresis (CE) and capillary electrochromatography (CEC) has been used to separate simple mixture to more complicated biofluidic mixture [6]. In CE-NMR, chip-based unit with microfabricated microcoils may be able to analyse picoliter volume samples [7]. The separation efficiency can be improved by optimizing the buffer pHs.

CE-NMR is able to analyse simple amino acid mixture like glycine, cysteine and arginine according to its first report [5]. The potential application of CE-NMR and CEC-NMR for analysis of metabolites in biofluids has been demonstrated [8]. CE-NMR has successfully analysed the major metabolites of paracetamol in human urine [6]. Comparison of chemical
shift for two major metabolites, paracetamol sulfate conjugates and paracetamol glucuronide, as well as endogeneous material that has been characterised, has confirmed the presence of these compounds. With S/N of 3, the estimated amount that can be detected ~ 10 ng.

The instrumentation required for CEC-NMR has added benefit that its sample loading capability is higher, making detection easier than conventional CE-NMR although the instrument used is almost the same. According to Gfrorer P et al. [9] gradient elution, which is a widely used technique to achieve faster and/or better separation of complex mixture, is a powerful technique that is able to successfully analyse an analgesic mixture containing caffeine, acetylsalicylic acid and acetaminophen. In order to increase the separation efficiency, a large sample injection volume is required. The total separation time has been reduced by one-third and the separation has been improved significantly by applying a solvent gradient of 0% to 30% CD3CN in 25 min with the solvent gradient in comparison to isocratic solution. Unfortunately there are adverse effects, namely chemical shift change and line broadening, from a solvent gradient elution on NMR spectral. These can be obstacles in performing steep solvent gradient with online NMR detection although these effects do not interfere with spectral interpretation in this work.

When pressurized capillary electrochromatography (pCEC) coupled to NMR, mixture of unsaturated fatty acid esters could be separated and identified and this has proven that applied pressure during CEC can decrease the separation time [10].

NMR Thermometry in CE and CEC - Several NMR chemical shifts in fact could be used to probe the temperature of samples due to its temperature sensitivity [11]. Lacey et al. introduced CE/NMR thermometry to measure intracapillary temperature [12]. This is based on the concepts that intracapillary temperature could alter the pH of the buffer, pKa, peak shapes, overall efficiency and migration times in electrophoretic measurements [13] and the events like DNA/RNA separation, aggregation, protein confirmation and denaturing are affected by temperature. Factors like water O-H stretching frequency [14], absorption spectrum of Co (II) chloride [15], buffer conductivity [16], electroosmotic mobilities [16] and miscellar capacity factor [17] could be used to calculate the internal temperature of CE.

According to Lacey [12] in the study of intracapillary temperature evolution in CE as a function of time at different voltage. The temperature remains constant prior to voltage application, where low voltage such as 2 kV cause only small increase in temperature (~ 1°C) even after 15 minutes of temperature application but latter the temperature will reach a higher steady state value, the rate of increase of temperature is greater for higher voltage.

Future Direction - One suggestion to make CE-NMR and CEC-NMR to become more widely applied technique is to increase the sensitivity of NMR. A possible solutions to use multiple RF coils on a single column, so that NMR spectral of a single migration band are recorded at multiple points. Fluidic systems containing multiple coils that allow individual bands to be parked and probed with NMR while continuing the separation and higher-field-strength magnets will continue to become available, increasing the performance of NMR. The approach like the separation and identification of molecular classes using pattern recognition can minimize long analytical procedures involved in metabolomics and proteomics, that could be performed accordingly. The appearance of applications using capillary scale separations hyphenated to NMR is expected to increase greatly over the coming decades.
References

CHAPTER 8 : REVIEW ON THE CHEMICAL PRODUCTION OF 1,3-PROPANEDIOL VIA EPOXIDE HYDROFORMYLATION METHODS (APRIL 2006)

Author : Chuen-Tat Kang, Individual Scientist and Researcher

Abstract : Up to date there are approximately three methods of producing 1,3-propanediol, an intermediate for the high quality fibres and films. This short review here will outline the chemical production methods, applying oxirane as starting material with syngas to produce 1,3-propanediol either in single or double steps. Various factors like water content, type of catalysts support, types of catalysts, reaction solvent and the addition of catalysts promoters like lipophilic phosphonium could influence the performance of the reaction besides adjusting the temperature and pressure of the reactions. Various co-catalysts and cobalt ligands could be supplemented in promoting the reactions but the cost in catalyst removal and addition of supplementary promoters has to be considered especially during the large scale production.

Keywords : hydroformylation, hydroxypropanal, cobalt catalysts, ethylene oxide, phosphine

Methods for the production of 1,3-propanediol - In the production of 1,3-propanediol, 3-hydroxypropanal is usually formed as process co-product. Various exemplary processes for the production of 1,3-propanediol include : - (i) hydration of olefinic aldehydes; (ii) epoxide hydroformylation, and (iii) fermentation of glycerol.

Hydration of olefinic aldehydes - Hydration of olefinic aldehydes such as arcolein may be accomplished by employing strongly ionized acids such as weakly acidic carboxylic acid cation exchange resin such as Amberlite IRC-84 (Rohm & Hass) and Rexyn RG-51(4) (Fisher Scientific Co.). The hydroxypropanal produced could latter be hydrogenated to produce aqueous solution of 1,3-propanediol.

Brief overview of epoxide hydroformylation - Ethylene oxide (oxirane) may be reacted with syngas like carbon monoxide and hydrogen under 65 atmospheric pressures and at temperature 110°C in the presence of a catalysts comprising an anionic phosphorus ligand-rhodium containing complex (Winter, 2002), to form 3-hydroxypropionaldehyde feed. The 3-hydroxypropionaldehyde feed is then hydrogenated in the presence of catalyst comprising maybe copper on a support and syngas as hydrogen source. The reaction could be performed either in one or two steps. The one-step reaction with higher efficiency is depicted in the reaction below according to Knifton (2003, 2004, 2005):

\[ \frac{O}{\text{CO} / \text{H}_2} \rightarrow \frac{\text{HOCH}_2}{\text{CH}_2} - \text{CH}_2 - \text{CH}_2\text{OH} \]

In general, relatively low reaction temperature (below 90ºC) and relatively short residence times (about 20 minutes to about 1 hour) are applied that could achieve HPA yields of greater than 80 % based on ethylene oxide converted (Han, 2002).

Properties of syngas in hydroformylation process - Synthesis gas is a blend of hydrogen and carbon monoxide, typically made by partial combustion of a petroleum feed. Commercial syngas comprises hydrogen and carbon monoxide in an H\(_2\) / CO ratio of about 1.0 - 2.0 and the higher ratio maybe prepared water gas shift reaction
Catalyst support in hydroformylation process - Suitable catalyst support include inert carrier composed of a clay, a metallic or glass sponge, or based on inorganic caride, carbon, or oxide from Group 2 - 6 and 12 - 14 metals and mixtures resistant to acidic medium including copper on ZnO, on silica, and on Cr₂O₃. The support maybe used as fine powder or shaped into mouldings such as pellets, granules, extrudates, honeycomb, a foam, a sponge or similarly large monolith (Lange, 2003).

Regulation of water concentration in hydroformylation process - Generally, the concentration of water in the hydroformylation process should be regulated accordingly because an excessive amounts of water reduce (HPA + PDO) selectivity below acceptable levels and may induce the formation of a second liquid phase. Generally at low concentration water can assist in promoting the formation of desired cobalt carbonyl catalyst species, but this will depend on the polarity of the solvent used in the process. It is believed that the hydroformylation in the most preferred solvent, methyl-t-butyl ether solvent, has the optimum water level within the range of about 1 to about 2.5 wt % (Han, 2001).

Application of ligand and co-catalyst - The application of improved catalyst system comprising a cobalt-tertiary phosphine ligand in combination with a ruthenium catalysts is not necessary for every hydroformylating reactions but according to Allen (2003) a PDO yield of up to 86 - 87 mole % could be achieved using a catalyst comprising cobalt ligated with 1,2-bis (9-phosphabicyclononyl) ethane as bidentate ligand, and either triruthenium dodecacarbonyl or bis (ruthenium tricarbonyl dichloride) as cocatalyst. In the synthesis of 3-hydroxypropanal, ditertiary phosphine-modified cobalt carbonyl catalyst and a catalyst promoter could be applied too. Generally the tertiary phosphine ligand used will have a general formula RRP-Q-PR’R’ wherein each group R and R’ independently or jointly is a hydrocarbon moiety of up to 30 carbon atoms, and Q is an organic bridging group of 2 to 4 atoms in length (Knifton, 2004).

Catalysts promoter - The promoter like lipophilic phosphonium salts and lipophilic amines could be used to further enhance the reaction rates without imparting hydrophilicity to the active catalyst. Examples are tetrabutyl phosphonium acetate and dimethyldodecyl amine. But at low concentration, water serves as promoter for the formation of desired carbonyl catalysts species but its excessiveness will induce the formation of second liquid phase and reduce product yield (Powell, 1999).

Solvent properties - The hydroformylation reaction is carried out in a liquid solvent inert to the reaction. The term “inert” means that the solvent is not consumed during the course of the reaction. Ideal solvents will be able to solubilize carbon monoxide, will exhibit low to moderate polarity such as the 3-hydroxypropanal intermediate and will be essentially nonwater-miscible.

The preferred class of solvents are alcohols and ethers with the formula R₂-O-R₁ in which R₁ is hydrogen C₁₋₂₀ linear, branched, cyclic or aromatic hydrocarbyl or mono- or polyalkene oxide and R₂ is a C₁₋₂₀ linear, branched, cyclic or aromatic C₁₋₂₀ hydrocarbyl or mono- or polyalkylene oxide (Weider, 1996). Ethers such as methyl-t-butyl ether, ethyl-t-butyl ether, ethoxyethyl ether, diethyl ether phenyl isobutyl ether, diphenyl ether and disopropyl ether are useful. Blends of solvents such as tetrahydrofuran / toluene, tetrahydrofuran / heptane and t-butyl alcohol / hexane can also be used to achieve the desired solvent properties.
Current preferred solvent is methyl-t-butyl ether due to the high yield of HPA under moderate reaction condition (Han, 2002).

Hydrogenation of 3-hydroxypropionaldehyde (HPA) to 1,3-propanediol (PDO) - Hydrogenation of the HPA to PDO can be carried out in aqueous solution at an elevated temperature between the range 50 to about 175°C, under the hydrogen pressure generally within the range of about 200 to about 2000 psig. The hydrogenation catalyst used normally based upon Group VIII metals, including nickel, cobalt, ruthenium, platinum and palladium, as well as copper, zinc and chromium and mixture of alloy thereof, but the most preferred is fixed-bed nickel catalysts (Slaugh, 1998).

Focus on current research - It will constitute advanced if there is single-step process applied for the synthesis of sufficient concentration of 1,3-PDO where phase separation could be invoked upon cooling by temperature reduction, addition of phase-split inducing agent and removal of a miscibilizing solvent without the use of high cost extraction and distillation methods. It will be better if heavy ends could be purged with minimal impact to the catalysts and crude PDO product could be used itself as reaction solvent (Allen, 2003).

Reference

Kesan Mangkin, Suhu dan Tekanan ke Atas Hidroformilasi Ethylene Oksida ke 1,3-Propanediol.

Dalam penghasilan 1,3-propanediol, pelbagai faktor kimia akan mempengaruhi produk yang diingini secara terus atau tidak langsung. Sebagai contoh, suhu dan tekanan. Antara semua mangkin, rhodium dan kobalt biasanya digunakan oleh jurutera kimia. Sebabnya ialah kedua-dua logam tersebut akan mempengaruhi dan meningkatkan produktiviti, penghasilan (yield) dan pemilihan (selectivity).

<table>
<thead>
<tr>
<th>Suhu Penghasilan</th>
<th>Halaju Tindakbalas Relatif</th>
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<tr>
<td>90</td>
<td>0.01</td>
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<td>100</td>
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Jadual 2 : Hubungan antara nisbah n : iso dan jumlah tekanan dalam HRh(CO)[P(OAr)₃] (CO / H₂ = 1 : 1, 1-oktena sebagai contoh) [6]

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<thead>
<tr>
<th>Jumlah Tekanan</th>
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Rujukan
Abstrak: 3-hidroksipropanaldehid (HPA) merupakan metabolit peralihan bagi metabolisma gliserol ke arah pembentukan 1,3-propanadiol. Voisenet (1910) sebenarnya telah memerhatikan bahawa bahan tersebut dan pembentukannya dari gliserol ketika pemuansnawain oleh bakteria walaupun 3-HPA merupakan sejenis antibiotik dan bahan pemula bagi plastik berkualiti tinggi, namun masih belum ada data analitik yang lengkap untuk bahan tersebut. Merujuk kepada data eksperimen bagi kertas ini, penggunaan 2-H untuk analisis NMR menunjukkan bahawa ikatan –CHO boleh diperhatikan pada δ9.5, RCH3 pada δ1.37, R2CH2 pada δ3.68, R3CH pada δ1.9 dan sebagainya. Spektrum NMR bagi karbon-13 menunjukkan enam petunjuk, pada shif kimia 40.1, 46.3, 56.2, 58.7, 89.7, dan 207.7 ppm. Dalam FTIR, spektrum yang mengandungi tanda O-H yang luas pada 3,450 cm\(^{-1}\) dan puncak besar disebabkan oleh tanda C=O pada 1,050 ke 1,150 cm\(^{-1}\), menunjukkan kehadiran kumpulan berfungsi hidroksil. Satu tanda pada 2,880 dan 1,380 cm\(^{-1}\) bersama-sama tanda C=O yang khas untuk aldehid hadir pada 1,730 cm\(^{-1}\). Semua maklumat analitik di atas adalah sama dengan rekod bagi kajian terdahulu (Talarico, 1989). Data GPC, walaupun bukan semuanya tepat, akan membantu dalam anggaran jisim molekul 3-HPA sebagai 257 pada ralat 63 %. Data HPLC dengan 3 puncak mungkin boleh menjelaskan 3 komponen 3-HPA yang hadir. Analisis SEM tidak memberi sebarang data pepejal yang penting tetapi memberikan maklumat pepejal 3-HPA sebagai partikel pepejal homogeneous. Dengan mengaplikasikan plot Circle, data kuantitatif bagi kepekatan 3-HPA yang disintesikan secara kimia dianggar sebagai 19.62 μmol / ml pada penyerapan 600 nm.

Katakunci : 3-hidroksipropanaldehid, NMR, akrolein, propanediol, fermentasi gliserol.

3-hidroksipropanaldehid (3-HPA, β-hidroksipropanaldehid, reuterin, nombor CAS 2134-29-4) merupakan sejenis bahan metabolit peralihan bagi metabolisma gliserol ke arah pembentukan 1,3-propanadiol, bahan pemula bagi plastik berkualiti tinggi. Reuterin atau kata samanya juga dikenali sebagai sejenis agen antibakteria yang biasanya dihasilkan oleh Lactobacillus sebagai perencat pertumbuhan ketika fermentasi susu. Dalam proses penurunan gliserol ke 3-HPA, peningkatan kandungan dan kadar penyerapan gliserol menyebabkan pengumpulan metabolit perantaraan, 3-HPA, yang juga menyebabkan penghentian selanjutnya bagi penghasilan produk dan pertumbuhan (Barbirato, 1996). Bukti-bukti telah menunjukkan bahawa reuterin berada pada keadaan keseimbangan dengan β-hidroksipropanaldehid sebagai campuran monomerik, monomerik terhidrasi dan bentuk monomerik berkaitan seperti yang ditunjukkan di bawah, dibuktikan oleh jisim molekul sebanyak 148 seperti yang dikaji oleh data NMR (Talarico, 1989). Dalam keadaan anaerobik dengan kehadiran semikarbazida hidroklorida, 3-HPA terkumpul dalam medium bahan fermentasi dan sama dengan apa yang dikaji oleh Abeles (1960) dalam proses fermentasi yang melibatkan Aerobacter aerogenes, tetapi dalam keadaan aerobik pengumpulan 3-HPA dalam fermentasi gliserol oleh Klebsiella oxytoca juga boleh diperhatikan.
3-HPA bersedia untuk diturunkan apabila NADH hadir. Penurunan 3-HPA adalah penting secara fisiologi untuk mendetokskisakan sel, membentukkan pengoksidaan semula koenzim dalam fermentasi heksosa, meninggalkan lebih banyak asetil dalam fermentasi gula untuk menjana ATP sebagai sumber tenaga apabila penurunan fruktosa kepada mannitol hadir dalam pengoksidaan semula koenzim (Claisse, 2000). 3-HPA digunakan untuk berfungsi sebagai agen pengoksidaan untuk NADH ke NAD⁺ dalam ekstrak bebas sel ketika dalam proses pengumpulan 1,3-PDO dalam kultur sel (Toraya, 1980). Dalam kehadiran haba dan ion hidronium dalam keadaan bersis, tindakbalas lebih cenderung kepada pembentukan akrolein dalam proses penyulingan (Pressman, 1942). Ia berfungsi sebagai salah satu penerima hidrogen fermentasi gliserol sebagai: \( \text{CH}_2\text{OHCHOHCH}_2\text{OH} \rightarrow \text{CH}_2\text{OHCH}_2\text{CHO} \). Walaupun terdapat pelbagai kajian kimia dan biologi ke atas 3-HPA, malangnya sehingga kini masih belum ada data eksperimen yang lengkap. Tujuan utama kertas ini adalah untuk menjelaskan ciri-ciri yang berada pada bahan aneh merujuk kepada analisis instrumentasi seperti NMR, FTIR, HPLC, GPC dan SEM di samping kaedah tradisional pewarnaan yang digunakan. Ini juga berharap bahawa data analisis yang lengkap bagi bahan ini berada pada pelbagai buku rujukan pada masa depan.

Bahan dan Kaedah - Sintesis Kimia bagi 3-HPA: 100 mililiter akrolein (90 %, Aldrich) disulingkan terlebih dahulu. 10 mililiter disimpan pada 4°C untuk kegunaan masa akan datang. 100 mL 1.5 M asid sulfirik (3N H₂SO₄) dicampur dengan 75 mL akrolein ke dalam tabung bujur bawah yang mengandungi air RO pada 325 mililiter. Campuran tersebut terkandung dalam air suam 50°C selama 3 jam sebelum diletakkan di atas ais. Kalsium karbonat (CaCO₃, BDH / Merck Chemicals) dalam bentuk pepejal ditambah melalui proses peneutralan, ditunjukkan oleh strip penunjuk universal pH. Larutan kemudian dituras dalam corong sinter dengan baki diisipadu dalam corong RO dalam vakum. Larutan kemudian dipindah ke dalam corong pengasingan, dibersih dengan 3 kali isipadu diklorometana. Larisan air dikumpul dan disejatkan pada 50°C dengan menggunakan penyejat putaran vakum tinggi.


<table>
<thead>
<tr>
<th>Larutan Stok</th>
<th>Reagen</th>
<th>Amaun</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pencelup Goofy</td>
<td>Asid</td>
<td>37.5 gram</td>
</tr>
<tr>
<td></td>
<td>Fosfomolibdik (H₃Mo₁₂O₄₀PₓH₂O)</td>
<td></td>
</tr>
</tbody>
</table>

Jadual 1 : Ramuan untuk Pencelup Goofy - Asid Fosfomolibdik 37.5 gram + H₂SO₄ Pekat 37.5 mililiter + Ce(SO₄)₂ 7.5 gram + H₂O 720 mililiter

Spektroskopi Infra Merah Penjelmaan Fourier (FTIR) : Analisis FTIR dijalankan ke atas 3-hidroksipropionaldehid (HPA) yang tertulen. 3-HPA dilarut dalam metanol gred HPLC dan disejat di dalam kandungan tertutup penyerapan natrium klorida (Sargent-Welch Scientific Company, Skokie III). Analisis dijalankan dengan spektrometer FTIR (no. 1550; the Perkin-Elmer Corp., Norwalk, Conn), dan data dimanipulasikan di atas stesen data (No. 7500, Perkin-Elmer). Sampel kemudian diisi dari 600 hingga 4,000 cm⁻¹, dan lengkuk dilicinkan dengan menggunakan program auto yang terdapat pada program Perkin-Elmer.

Kromatografi Ceair Berpencapaian Tinggi (HPLC) : Sampel 3-HPA ditulenkan untuk pengesanan komponen sistem 3-hidroksipropionaldehyde (HPA). Kira-kira 50 mikroliter sample disuntik ke dalam laluan HPLC yang terdiri daripada 150 x 4.6 milimeter Alltima C18 dengan laluan 410. Fasa bergerak yang dikenakan ialah 10 % metanol dan 0.1 % asid trifluoroasetik (TFA) dan set kaedah akueus mengandungi 100% A PDA R1.

Fasa Gas Kromatografi (GPC) : Jisim molekul bagi polimer yang dijangka dicirikan dengan kromatografi lauhan gel yang dilaksanakan tetrahidrofurran (THF, 1.0 mililitre / min) pada 25°C dengan menggunakan instrumen GPC Waters, dengan pengesanan Indeks Biasan Waters 2414, kolum bagi satu siri daripada empat Polymer Laboratories PLGel (3 * 5 mililitre Mixed-C and 1 * 3 mililitre Mixed-E), dan Millenium Software. GPC kemudian ditanda semuah dengan piawaian polisterena penyebaran yang sempit (Polymer Laboratories EasiCal, MW from 264 to 256000), dan jisim molekul dilaporkan sebagai bahan semacam polisterena.


Kuantifikasi Berwarna 3-HPA : Untuk memperoleh keluk piawai, 0 - 6 mikromol akrolein ditambah kepada 6 mililitir air RO dalam 50 mililitir tiub penuas Eppendorf polipropilena yang boleh dibuang. Kemudian 4.5 mililitir bagi larutan DL-triptofan, mengandungi larutan 0.01 M dalam 0.05 M HCl, distabilkan dengan beberapa titik toluena) dan 18 mililitir isipadu HCl 37 % dan 0.75 mililitir larutan DL-triptofan. Campuran yang mengandungi piawai dan sample kemudian dijeram dalam air 37°C dan ketumpatan optic (OD) diukur pada 600 nanometer dan 1100 nanometer. Sebelum ujian penentuan kepekatan 3-HPA, sample 3-HPA

| H₂SO₄ Pekat | 37.5 mililiter |
| Ce(SO₄)₂ (BDH Chemicals) | 7.5 gram |
| H₂O | 720 mililiter |
dicairkan dengan menggunakan air suling sebelum dicampur dengan reagen untuk memastikan OD akhir kurang daripada 1.0. Mengikut Luthi-Peng (2002), kaedah ini membenarkan kuantifikasi persis bagi 3-HPA dengan menggunakan akrolein sebagai piawai.


Oleh sebab 3-HPA tidak dapat secara komersial, cara yang paling baik untuk memperolehnya adalah melalui sintesis kimia dengan laluan pemangkinan berasid dari akrolein ke 3-HPA. Mengikut bahan tulisan terkini hasil 3-HPA yang dibentuk dalam proses sintesis mengandungi takat didih pada 53°C tetapi ketika proses penyejukan semula berlaku 3-HPA juga diubah ke cecair kuning pekat, dipercayai merupakan 3-HPA hidrat.


Resonans Magnetik Nuklear (NMR) : 1H NMR bagi 3-HPA dalam deuterium oksida tidak menunjukkan puncak dalam δ6.5 (C=C), menunjukkan bahawa hampir semua akrolein telah diubah kepada produk yang kebanyakannya mengandungi 3-HPA. Analisis yang teliti bagi spektrum NMR bagi 3-HPA menunjukkan bahawa ikatan –CHO bagi aldehid yang diperhatikan pada δ9.5, RCH = δ9.5, RCH pada δ1.37, R2CH pada δ3.68, R3CH pada δ1.9, RORH pada kira-kira δ2.6 dan CH2O pada kira-kira δ3.7, manakala puncak tajam pada kira-kira δ4.6 menunjukkan puncak pelarut dengan struktur CH(OD)2.

Eksperimen pemasangan homonuklear menunjukkan tanda pada 2.6, 3.68 dan 9.5 dan boleh dikaitkan dengan tanda 1.9, 3.7 dan 5.0. Nisbah luas tanda dan bentuk pemisahan
bersamaan keputusan perpasangan homonuklear menunjukkan bahawa dua molekul hadir dalam larutan akueus 3-HPA dan dimer 3-HPA. Tanda lemah juga terhasil dalam sesetengah kes, menunjukkan kemungkinan bagi pembentukan dimer 3-HPA dan bahan-bahan asing yang lain.

Spektrum karbon-13 menunjukkan enam tanda, pada perolahan kimia 40.1, 46.3, 56.2, 58.7, 89.7 dan 207.7 ppm. Sila mengambil perhatian bahawa 207.7 ppm tidak ditunjukkan disebabkan oleh ruangan terhad tetapi diinterpretasikan sebagai karbon aldehid. Karbon yang diikat secara terus dengan oksigen menghasilkan puncak pada 56, 58 dan 89 ppm, dan puncak yang berada pada 40 dan 46 ppm ditafsirkkan bentuk alifatik (Rajah 1). Spektrum NMR proton bagi 3-HPA dalam methanol terdehidrasi juga mengandungi 3 kumpulan tanda, keputusan pemisahan, nisbah luas tanda dan perpasangan homonuklear (data tidak tertunjuk) ditafsir untuk mewakili β-hidroksipropanaldehid yang wujud dalam bentuk metoksi, malangnya puncak ini tidak boleh dikesan kerana ia dilindungi oleh tanda metanol yang hadir dalam pelarut bagi spektral karbon-13. Spektroskopi Infra Merah Penjelmaan Fourier (FTIR) : Spektral yang mengadungi tanda O-H yang luas pada 3,450 cm⁻¹ dan puncak besar disebabkan oleh tanda C-O pada 1,050 ke 1,150, menunjukkan kumpulan berfungsi hidroksil. Tanda C-H pada 2,880 dan 1,380 di sepanjang C=O khas bagi aldehid wujud pada 1,730 cm⁻¹ (Rajah 3).


Kromatografi Cecair Berpencapaian Tinggi (HPLC) : Tiga puncak boleh dilihat (Rajah 4) yang mana terdapat kemungkinan 3-HPA boleh dipisah separa tetapi lebih eksperimen akan diperlukan untuk membuktikan perkara tersebut. 3-HPA sebenarnya boleh ditukar kepada bentuk hidrat dan dimer dalam keseimbangan dan keadaan keseimbangan selanjutnya memerlukan penentuan dan eksperimen tambahan. Menikut tafsiran Stuart Litter, seorang ahli sains secara percakapan, puncak yang wujud antara 2.00 hingga 3.50 minit dianggar sebagai 3-HPA hidrat kerana kumpulan hidroksil wujud dalam bentuk hidrat, membantu tarikan kepada fasa bergerak metanol dan asid trifluoroasetik. HPA hidrat merupakan komposisi utama dengan x mol% merujuk kepada pengiraan luas. Puncak kedua wujud antara minit 4.00 dan 5.50, dianggar sebagai HPA karbonil, manakala puncak terakhir dan terkecil wujud antara 6.50 hingga 8.00 minit, dianggar sebagai HPA dimer kerana jisim molekul yang tinggi telah melambatkan pergerakannya ketika pengangkutannya oleh fasa bergerak walaupun mengandungi bilangan kumpulan hidroksil yang sama bagi setiap molekul.


Kromatografi Fasa Gas (GPC) : Data analisis GPC yang diperoleh Ming Chen menunjukkan bahawa 3-HPA sebenarnya tiada keupayaan untuk membentuk polimer rantai panjang. Bukan seperti hidrokarbon yang lain, 3-HPA hanya boleh membentuk dimer dengan jisim molekul 157. Keputusan yang ditunjukkan oleh data GPC pada Rajah 5 menunjukkan data yang diperoleh ialah 257, menunjukkan perbezaan sebanyak 63 % daripada nilai jisim molekul sebenar bagi dimer 3-HPA. Ini boleh dikatakan memuaskan kerana sekurang-
kurangnya sudah diketahui bahawa HPA bukan hanya dalam bentuk dimer tetapi juga dalam bentuk hidrat dan karbonil.

Sebenarnya GPC ialah satu kaedah yang hanya boleh digunakan dalam penentuan jisim molekul bagi polimer rantai panjang. Untuk sebatian diketahui yang mengandungi jisim molekul yang rendah, boleh dijangka bahawa kaedah ini boleh digunakan untuk menganalisis sama ada pempolimeran wujud dalam sampel yang diuji untuk menjangka dengan lebih lanjut lagi struktur molekul yang mempunyai jisim molekul yang rendah. Biasanya GPC digunakan untuk polimer yang mempunyai jisim molekul yang lebih rendah daripada 10,000. Untuk aldehid seperti 3-hidroksipropanal dan akrolein, boleh dijangka bahawa kaedah ini boleh digunakan untuk menganalisis keadaan pempolimeran untuk molekul pendek yang berjisim rendah.


Mikroskop Imbasan Elektron (SEM) : Rajah 6 menunjukkan bentuk kristal yang membentuk 3-HPA apabila disejukkan di bawah takat beku akan menunjukkan kandungan homogenious. Tiada tanda yang menunjukkan perbezaan antara bentuk dimer, hidrat dan karbonil bagi 3-HPA. Kebanyakan kandungan kristal adalah lutsinar. Jika takat beku bagi komponen 3-HPA adalah berbeza, boleh dijangka bahawa sekurang-kurangnya tanda pecah boleh diperhatikan dalam perkara initetapi Rajah 6 tidak menunjukkan keadaan begitu, mungkin disebabkan oleh imej yang dibentuk oleh SEM tidak dapat kelihatan struktur sebenar dalam keadaan pemejalan disebabkan oleh pengaburan imej yang mengadungi bintik hitam dan putih yang kecil yang mengganggu pemerhatian para pengkaji. Keadaan homogenious berminyak 3-HPA yang dihasilkan mungkin tidak menunjukkan perbezaan daripada kaedah ini boleh diperhatikan pada keadaan carikan yang berbeza.


Kuantifikasi Berwarna 3-HPA : Kaedah Circle (1945) berasas daripada warna yang dihasilkan oleh kondensasi akrolein dengan triptofan dirangsang oleh asid hidroklorik pekat, berupaya untuk mengesan jisim sekecil 5 mikrogram. Kaedah ini sesuai hanya dengan ketidakhadiran aldehid yang lain atau kepekatan yang kurang daripada akrolein. Dua graf telah diplot dengan ketumpatan optik melawan kekepatan aldehid di bawah panjang gelombang 600 nanometer dan 1100 nanometer dengan menggunakan spektrofotometer UV-1601 Shimadzu (UV kelihatan). Daripada analisis diperhatikan bahawa penyerapan adalah lebih tinggi pada panjang gelombang yang rendah. Dalam panjang gelombang 600 nanometer, graf yang diperoleh mempunyai persamaan A = 0.0395 C + 0.106 dan pada 1100 nanometer, kecerunan graf adalah sedikit rendah, dengan persamaan A = 0.0203 C + 0.0733, yang mana A ialah penyerapan dan ketumpatan optik dan C ialah kepekatan aldehide dalam unit mikromol dalam tiub 6 mililiter. 3-HPA yang dihasilkan pada ABS-600 ialah 0.881,
menunjukkan kepekatan bahan 3-HPA yang dijangka ialah C = (A - 0.106) / 0.0395 = 19.62 mikromol / mililiter.


Kesimpulan - 3-HPA sebenarnya bukan bahan baru yang baru ditemui baru sahaja tetapi telah dijumpa secara biologi oleh Voisenet yang memerhatikan pembentukan gliserol ketika kemusnahan win berbakteria oleh amaracrylus (Voisenet, 1910). Abeles (1960) juga menunjukkan bahawa 3-HPA ialah produk pendehidratan gliserol.

Data yang dibekalkan dalam kertas ini akan menunjukkan struktur 3-HPA merujuk kepada analisis ikatan apabila mengalaplikasikan NMR dan FTIR. Jisim molekul telah dijangka secara tentatif walaupun ia bukan amat tepat tetapi boleh digunakan sebagai rujukan apabila GPC digunakan. Tiada maklumat yang jelas boleh didapat dari data SEM bagi pepejal 3-HPA tetapi nasib baik sedikit maklumat boleh diperhatikan pada carta HPLC yang mana 3 puncak mungkin boleh mewakili 3 komponen yang berada pada bahan itu. Daripada data eksperimen awal yang berada untuk 3-HPA, diketahui bahawa potensi kegunaan bahan ini, sehingga kini, masih belum diketahui sepenuhnya, terutama penggunaannya sebagai bahan pemula 1,3-propanadiol dan sebagai pengawet makanan dalam industri pemprosesan makanan.

Pemberitahuan - Saya ingin berterima kasih kepada rakan sekerja saya dalam pelbagai makmal swasta di Victoria, Australia yang telah membantu saya merangka dan membentuk eksperimen. Saya ingin mencari sumber kewangan selanjutnya untuk meneruskan kajian dalam bidang ini, dan berharap para penyumbang yang mempunyai objektif yang sama dengan saya dalam eksplorasi tersebut boleh menghubungi saya dengan menggunakan maklumat di muka depan kertas ini untuk perbincangan selanjutnya.

Rujukan
Abeles RH, Brownstein AM and Randles CH. Beta-hydroxypropionaldehyde, an intermediate in the formation of 1,3-propanediol by Aerobacter aerogenes. Biochimica et Biophysica Acta 1960, 41 : 530 - 531.
Claise O and Lonvaud-Funel A. Assimilation of glycerol by a strain of Lactobacillus collinoides isolated from cider. Food Microbiology 2000, 17 : 513 - 519.
I started writing this part of study on 22 January 2012 (Sunday) around 5 PM in the State Library of Victoria of Australia. I wonder what are the topics that are most appropriate for the forthcoming essays on animal welfare. The first idea that comes to my mind is about the animal rights issues. However, I may leave such legal discussion for latter section, but put the priority of the beginning of such discussion more about the scientific issues.

Literature survey begins by referring to the animal cognition behaviour. [1] In both human and non-human animals, relative numerosity discriminations have played a major part in the investigation of nonverbal numerical abilities and number representation. There are many studies have been conducted in order to examine the ability of non-human animals to discriminate spontaneously on relative number, by requiring the experimental subjects to make one choice out of two. [2] Some research task of animal cognition involves food and light sensational stimuli as well. In a specific set of experiment applying pigeon as non-human subjects, the bird is able to categorize exemplars as small or large and such discriminative ability is usually tested in numerical bisection task. Non-human subjects, mainly research animals, are able to differentially respond to stimuli that differ in relative numerosity, categorize successfully the stimuli as large or small, and so can transfer such performance to novel numerical values both outside and within the training range. Such research has also shown that non-human are able to bisect both auditory and visual numerical stimuli. [3] Apparatus applied may consist of chambers containing a row of three keys, measured at 40 x 40 x 32 centimeters with the rows of keys situated 21 centimetres above the floor. The panel may contain a houselight located 8 centimetres above the centre key, and a food hopper, located 13 centimeters below. Fans are also applied to provide ventilation at each chamber, plus masking noise during experimental sessions. Response key and houselight are dark during reinforcement. The hopper was illuminated as well as raised to allow access to the wheat. The animal cognitive experimental session could be controlled and recorded by computer located at the adjacent room. The pigeons as experimental subjects have to perform discrimination in 2 different sets of conditions. Typical results also found that the pigeons response correctly at around 85-90% rate. The simple set of experiment has revealed to human being that animals do possess simple cognitive ability as the human being, though non-verbally or visually sometimes. Animals do have discriminative behaviour on the object surrounding them, and able to recognize the liked and disliked, danger and safe, friends and enemies as the human being. This is the basic idea where animals, as biological beings, have certain degree of cognitive similarities as the human beings.

VEGETARIANISM AND LOVING KINDNESS

Human beings may die if without food but may survive even without meats from animals because plants could be an equivalent and comprehensive sources of nutrients. In the context of Christian Bible during the time when Adam and Eve in Paradise, there was no killing, the state before the Fall when beasts were tame. Adam and Eve, as well as all creations were herbivores inevitably. [4] Killing of animals as food supplement in fact is not necessary for human being in order to survive, but sometimes human beings are allowed to kill dangerous
and life-threatening beasts only in the occasion when the safety of the human beings are threatened. Since the beginning of human civilization, many wars had occurred among different human populations and tremendous number of life had been sacrificed when human has been allowed to kill the other human beings that are also a part of animal biological family. Such atrocious genocides occur may also be partially contributed by the habit of majority human populations that justify the killing actions of other beings in order to obtain food, further ignoring the basic and fundamental rights of animals that live together with the human population in this world. In some health promotion supplement, there are invaluable and rich nutritional resources available in plant, though not fully explored, inclusive but not limited to traditional Chinese medicine, Ayurveda etc. Dietary supplement of plant origin has been widely and increasingly applied, then the adding of basic scientific understanding of the chemistry, biotechnology and biology of such supplement ingredients and disseminate the results may increase the confidence of public uses of plant instead of animal ingredients in natural food supplement. [5] Plant supplement can feed more people and retain more natural benefits that could not be obtained from animal sources, where the serious hunger is not possible at correct regions.

BUDDHISM AND KILLING PREVENTION AGAINST CRUELTY ON ANIMAL

Buddha the enlightened lived between 566 and 486 BC. All animal sacrifice and any trade of carcasses were banned. Killing, aggression and war were condemned. The very poor peasant could even survive even without meat of animal consumption. Stale boiled rice, a grain porridge mixed with mustard stalk, mixed with half-cooked gourds or other vegetables, rice boiling water of fermented etc is sufficient to make the poorest in the world to survive, provided that no unnecessary killing occur. In certain highland areas namely in Tibet, killing of animal is a must in order to obtain sufficient food in very cold highland areas, but current technology and the prosperity of food resources in other parts of mainland China, food resources from animals are not necessary when human beings are able to opt non-animal sources for basic survival requirement. Certain occupations, namely soldiers, fishermen and butchers engage in tremendous effort of killing as a part of the job. [6] Human beings cannot be fully independent if without killing plant, namely vegetables, tuber or roots that could be part of the survival component of the being. Full prevention against killing, either against the animal mainly and plant, may only be achieved via fruit consumption or frugivore. Invention of fruit types with modern genetic technology, where the product tastes like meat, big and heavy enough to feed as many human beings and other animals as possible, consisting of all necessary nutrient of basic survival without destroying the life of the beings, could be only the ideas available to prevent killing and retard cruelty, further achieving peaceful of mind and higher level of spirituality.

ANIMAL AND PLANT PRODUCTS – THE CHOICES

The food from plants in fact is quite sufficient for the survival of human being even without the consumption of any animal products. When the animals are taken as food the animals may also be killed. More plants and grains are needed to feed the animals in comparison to merely serving the human beings with plant products. There is always impossible for the hunger of human beings to be present in any part of the world when the human beings consume fully on the plant products particularly the grains, the basic food component to fill
the stomach of human, digested by the enzymes to generate energy, provided that proper transportation of food from the food-rich areas to food resource poor regions are available effectively.


Natural fruit products do already posses necessary nutritional supplement for the needy human beings to survive, further protecting the human beings from infectious disease. Then the killing of other animals may not be wise choice for human beings to obtain food, not only because of the healthy reason but also because of the loving kindness given to all animals in the world. Human beings are allowed to kill animals when such beast posses dangerous threat to human life. Human beings are therefore justified to protect their life by killing, however such act may only be justified only when no other choices to leave the animal to survive. Killing is deemed as the final resort for human beings to protect themselves from the threat of other animals, when in fact there are situations when the killing of other animals could be avoided. Such reasoning may also be similar to the terminal punishment of those human offenders that must be killed in order to ensure the peace and order of human society. For many innocent animals, for example chicken, duck, lamb, cow, goat etc that have been domesticated for food, they serve no threat to human beings. Human beings eat such animals not because they are truly in hunger or no other food choices of plant origin but because of the very special and delicious flavour available within such meat of animals with different forms of preparation and cooking methods. Food of plant origins could be delicious also, that can also be cooked in various creative methods, as the meat product preparation. The author did not discourage human being from eating meat but just provide comparison of efficient food production for the human being in future that agricultural plant production for food production is the right choice that can accommodate the maximum number of human population in this world. The production of huge amount of meat for human consumption in this world is also a method to reduce hunger and solving the food shortage problem as well by killing, not only kill the animals of poultry but also inculcate the habit of killing other human beings as well. When human beings are killed, the human population may also be reduced, and the food production for the sufficient consumption of human beings when less human beings are living in the Earth planet, that can rely on both plant and animal products to survive as an omnivore. This is another choice of human being to survive in the nature of cruelty as reality of life when wars and riots with killing of human beings are always could not be prevented when human beings kill the other animal being at first instance. The suffering experienced by the animals when killed by other human beings is of the same degree as the suffering experienced by the human beings when being killed by others.
Increasing the production of meat via livestock cultivation may unintentionally expose the human beings to various previously unimportant diseases. Agriculture methods of establishing man-made water conservation and irrigation system, modifying the regional environment by cleaning scrub and forest, replacing pasture or forest with crops, are measures that have profound influence on the stable ecosystem previously, leading to emergence of new disease and increasing variation of the disease pattern, that could happen to both animal and plant cultivation for food purposes. However, animal production does possess higher environmental risks in comparison to plant production for food when animals exotic to the region are introduced and the ratio of different species of native and domestic animals are changed to accommodate very huge number of animals in farms, where such problems of additional environmental impacts may not happen in plant gross production for food purposes. [16] Various diseases of animals that can also infect human beings, may spread to human population, during the cultivation of the farm animals for food product, could be as follows but not limited to: brucellosis, Q-fever, leptospirosis, anthrax, tuberculosis, chlamydiosis, salmonellosis, tularaemia, plague, melioidosis, listeriosis, erysipeloid, ringworm problem, dermatophilosis, taeniasis, ectoparasites, sporadic parasitic infections and lyme disease etc. There are so many diseases of cultivating animal products for food. Human beings have taken such a huge risk to prevent from infection of such diseases before being able to obtain a very limited amount of meat after killing the animals. Such amount of risk experienced by plant crop cultivation may not be as huge as the animal cultivation for food, though the environmental pollution of fertilizer, pesticides etc could also be the problems of gross production of plant agricultural products for food.

MEDICAL ADVANCES WITHOUT ANIMALS

Making use of animal for various scientific research experiments for human health improvement in fact is a cruel act against the animal when the experimental animals are latter to be killed or disposed, merely for the benefit of human being. This is also true for animals that have been reared in farm. Certain comment provides that the medical technology may not advance without the use of experimental animals. Animal usage is the core of medical technology in modern area, serving as a control before application on human beings in the testing of effectiveness of certain types of medicines. [17] More and more scientists are moving away from animal testing in modern medical research, with tremendous encouragement is given to those medical technology, that previously used animal in experiment, namely oncology research, to shift the direction into molecular biology and cell culture techniques. [18] The animals may not only limited to mice or guinea pig but also could include farm animals like chicken, cow, goat etc that used mainly for human consumption purposes.

For those having excessive cholesterol or obesity problems, reduction of the consumption of animal product is one of the solutions. This could be achieved by using vegetarian meat to substitute the actual meat from animals. Synthetic meat of farm animals in fact could be grown in vitro without killing the animal. Artificial meat via biotechnology is the method that also usual meat eater to consume less animal fat with cell culture technology, that may also reduce the risk of hypertension, high cholesterol, heart diseases due to improper food consumption. [19]
PREVENTION OF CRUELTY TO ANIMAL – ANIMAL RIGHTS

Basic animal rights are important to let the human beings not to simply kill, injure and maltreat those innocent beings. Many animals are suffering under the invigilation of human being, particularly in the slaughterhouse of poultry. There is insufficient animal rights protection for most of the beasts that have been treated unfairly. Life is precious even for plants and animals. However, the current trend of animal protection law, whether in Australia or outside Australia, do seem only protect the animals that have been unlawfully treated, particularly among those companion animals of dogs and cats. For farm animals that produce meat, typical problems encountered could be due to congestion, poor breeding environment and feeding situation etc. Trapping and cutting with serious consequences to the animal should not be allowed since this may hurt the animals, when such injurious act to achieve the purpose, sometimes could be prevented. There are better methods to treat the animal other than cruel practices. Animals are the friends of human beings and should also be protected from various cruel acts as our human being. Human being has human rights, so as the animal as a part of our life. Animal shall be treated equally.

ANIMAL IN FARM – A BRIEF INTRODUCTION [21]

There are various farm animals in Australia that serve as food for human being consumption among Australian residents. The definitions of various farm animals for food according to The Concise Oxford Dictionary of Current English, Eight edition, areas follow but not limited to – (a) chicken (page 194) noun, plural : chicken or chickens. A young bird of domestic fowl, a domestic fowl prepared as food, its flesh; (b) duck (page 362), plural is duck or ducks, any of various swimming birds of the family Anatidae, especially the domesticated form of mallard or wild duck, the female of this (but the male is called drake), the flesh of a duck as food; (c) cow (page 267), a fully grown female of any bovine animal, especially of the genus Bos, used as a source of milk and beef; (d) goat (page 505), a hardly living frisky short-haired domesticated mammal, Capra aegagrus, having horns and (in the male) a beard, and kept for its milk and meat, either of two similar mammals, the mountain goat and Spanish goat; (e) goose (page 509), plural : geese, any of various large water-birds of the family Anatidae, with short legs, webbed feet, and a broad bill, the female of this (opposite male gander), the flesh of a goose as food; (f) fish (page 442), plural : same as fish, a vertebrate cold-blooded animal with gills and fins living wholly in water, any animal living wholly in water, especially cuttlefish, shellfish, jellyfish, the flesh offish as food; (g) lamb (page 669), a young sheep, the flesh of a lamb as food; (h) sheep (page 1115), plural : same, any ruminant mammal of the genus Ovis with a thick woolly cost, especially kept in flocks for its wool or meat, and noted for its timidity; (i) kangaroo (page 644), a plant eating marsupial of the genus Macropus, native to Australian and New Guinea, with a long tail and strongly developed hindquarters enabling it to travel by jumping; (j) prawn (page 936) : any of various marine crustacean, resembling a shrimp but usually larger fish or prawn. There are only ten types of animals in Australia are defined when there are still some least popular farm animals in Australia that have not been defined in this essay due to the constraint of words. In the promotion of loving kindness among the farm animals, usually people always consider the vertebrate land animals like (a), (b), (c), (d), (e), (g), (h) and (i) without considering water animals that are small but grown abundantly in salty or plain water like (f) and (j). The protection of animal rights for all the abovementioned animals should be considered to be listed in the provision of better living environment to prevent congestion, shortage of food or
water, poor living environment etc. Proper agricultural methods should be encouraged for farm industry in order to increase the quality of newborn animals living in farm for food, though finally those abovementioned animals may die after being killed. The concept of true loving kindness to animals may not be only limited to only the improvement of living environment and reduce the chances of maltreatment or cruelty against their rights even the human beings may not be able to sense their feelings. Reduction of the number of killings among those animals by man should also be taken into account where the development of new technologies to substitute the meat products with plant products with almost equivalent taste and flavour, having equal or even higher quality than the currently available meat products. For vegetarian, normally new vegetarian products could be found that mimic the taste and structure of true meat. However the price of such vegetarian “meat” products are still very uncompetitive and sometimes more expensive than the true meat products, that may lose the nutrient when being processed inadequately. New vegetarian products, normally consumed by religious practitioners of Buddhism, Hinduism and other forms of secular vegetarianism, should invest more on developing and research on low price vegetarian products, without the need to add unnecessary toxic chemicals to make the vegetarian products look like meat, that may further reduce the quality of food products of vegetables, further discouraging the vegetarianism and prevention of killing.

ANIMAL LAW IN AUSTRALIA - FARM ANIMAL FOCUS

There are various animal protection legislations in Australia, mainly executed under the state law, where every Australian state has a slight difference in animal law, with some practices allowed but some prohibited. Relevant legislations of animal protection in Australian states are Prevention of Cruelty to Animals Act 1979 (New South Wales in Australia), Animal Care and Protection Act 2001 (Queensland in Australia), Animal Welfare Act 1985 (South Australia in Australia), Animal Welfare Act 1993 (Tasmania in Australia), Prevention of Cruelty to Animals Act 1986 (Victoria in Australia), Animal Welfare Act 2002 (Western Australia in Australia), Animal Welfare Act 1992 (Australian Capital Territory in Australia) and Animal Welfare Act 1999 (Northern Territory in Australia). The differences could be viewed at the docking of tails of farm animals. The docking of cows tails has been banned by the government of Queensland state in Australia unless such action is performed by veterinary surgeons for the disease control purposes, the government of South Australian state of Australia prohibits tail docking of cattle unless a veterinarian has been certified for the necessary of such procedures. A writer George Orwell, commented in his book with the title “Animal Farm”, that “... Man is the only creature that consumes without producing. He does not give milk, he does not lay eggs, he is too weak to pull the plough, he cannot run fast enough to catch rabbits; Yet he is the lord of all the animals. He set them to work, he gives back to them the bare minimum that will prevent them from starving, and the rest he keeps for himself.” [22] There are various types of farm animals available in Australia with a strong and proud farming tradition on a huge area of farming land in an isolated continent. Farm animals available in Australia with a strong and proud farming tradition on a huge area of farming land in an isolated continent. Farm animals available in Australia, produced for various purposes could be as follow but not limited to: cow, chicken, sheep, pig, goat, duck, lamb etc. Almost all these animals could be killed in order to obtain the meat for human food consumption. There are some not to be killed but able to obtain the non-meat products from the animals. The animal products could be egg obtained from fowl and milks available from fowl and milk available from poultry. Human is an omnivore animal that can
consume both plant and animal products. Certain category of human beings, under the vegan group is prohibited from eating all the abovementioned animal products. Lactovegetarian is allowed to consume milk without meat consumption, whereas ovovegetarian is allowed to consume eggs without killing the animals for food purposes. The perception of killing could be different from one culture and ethnic to the other. On the other hand, animals of seafood, namely fish, crabs, prawns, oysters etc have not been mentioned in the animal welfare law in Australia. Current Australian animal welfare legislations are more concern on the acceptable farming and husbandry practices for farm animals for food, particularly related to improved living conditions of such farm animals that may be slaughtered for food. [23] All animals that have been slaughtered may undergo certain degree of suffering, whether they are for merely food purposes or not. Current Australian animal welfare legislations merely protect the farm animals for living healthily and happily before they are killed even such farm animal did nothing wrong for the human beings. Neither these farm animals threaten the safety and security of human beings. Such legal issues may be worthwhile to be analyzed to justify the logic behind the Australian animal welfare law.

Methodology : There are various state laws in Australia to be analyzed on their effectiveness in the protection of animals particularly those from farm for food. The analysis begins with Victorian animal welfare law in Australia, the place where the applicant organization is located. The attention of the research may be paid to various parts of animal welfare legislations that consist of irregular, incomplete and insufficient details that may expose the animals, particularly those from farm for food purposes, to various unfair treatment. Example 1 : Prevention of Cruelty to Animals Act 1986 (Victoria in Australia), section 24 U (Part 2A - Enforcement, Division 6 - Duties and powers as to seized animals : Steps to be taken where welfare of animal is at risk) - (1) If an animal has been seized under this part and - (a) if, after taking all reasonable steps under section 24R, either the owner or the person in charge of the animal is able to be contacted; and (b) the person who seized the animal reasonably believes that the welfare of the animal is at risk, and (c) application has been or is proposed to be made under section 24X; the person who seized the animal must serve a notice of seizure under this section on the person, who is able to be contacted, or cause such a notice to be served... (5) For the purposes of this section, a notice of seizure is a notice in writing that sets out - (a) a description of the animal, and (b) the name of the inspector who seized the animal, the inspector’s contact details and the reason why the animal has been seized; and (c) that the animal will be disposed of in accordance with this Division if the owner or person in charge of the animal does not contact the inspector within 14 days after the notice is left at or sent to the premises. Sample comment 1 : The purpose of Prevention of Cruelty to Animals Act 1986 (Victoria in Australia), section 24 U is to protect those animal that have been maltreated to release themselves from sufferings. However, those animals, especially those from farm for food, may be disposed if the owners did not claim their rights on the abandoned animals. Any disposable animals may be further susceptible to larger amount of cruelty, conducted not by the owners of the animals but by the animal welfare authority that engaged them in killing instead of helping those abandoned animals to find new owners that are truly interested to take care of such animals as their own sons or daughters. Such inconsistent provision of Prevention of Cruelty to Animals Act 1986 (Victoria in Australia) has also defeated the purpose of the Act as provided under section 1 : Purpose (Part 1 : Preliminary) : The purpose of this Act is to - (a) prevent cruelty to animals; and (b) to encourage the considerate treatment of animals; and (c) to improve the level of community awareness about the prevention of cruelty to animals. Example 2 : Prevention of Cruelty to Animals Act 1986 (Victoria in Australia), section 9 (Part 2 - Protection of Animals) : Cruelty
(1) A person who - (a) wounds, mutilates, tortures, overrides, overdrives, overworks, abuses, beats, worries, torments or terrifies an animal... (c) does or omit to do an act with the result that unreasonable pain or suffering is caused or is likely to be caused, to an animal; ... commits an act of cruelty upon that animal and is guilty of an offence and is liable to a penalty of not more than, in the case of a natural person, 120 penalty units or imprisonment for 12 months or, in the case of a body corporate, 600 penalty units. Sample comment 2: Almost all slaughterhouses of pig, cow, goat, lamb, chicken etc for meat production in Australia may be prosecuted under Prevention of Cruelty to Animals Act 1986 (Victoria in Australia), section 9 for wounding and abusing the farm animals before killing them in order to obtain their flesh for human consumption. At the same time, consumers of fresh meat sold in markets, supermarkets and departmental stores are encouraging the butchers to slaughter the innocent animals by creating the business opportunities of animal flesh. The slaughterhouse, categorized as a body corporate, may be fined for 600 penalty units, as well as the independent butcher that may also be fined, for 120 units for involving themselves in animal slaughter under criminal law for animals in Australia or Prevention of Cruelty to Animals Act 1986 (Victoria in Australia). Section 9 of the Act may not be fully and well-implemented when such legislations are merely for symbolic purposes without actual legal validity for not being able to be executed correctly in order to reduce unnecessary killing on animals that are reared in the farm for food consumption.


The research of animal law in the state of Victoria in Australia may need to refer to other interstate animal welfare legislations as abovementioned, particularly of Australian Capital Territory (ACT), New South Wales (NSW), Western Australia (WA), South Australia (SA), Queensland (QLD), Northern Territory (NT) and Tasmania (TAS). Further research on the similarities and differences on non-Victorian animal welfare legislation are to be research and further analyzed on the strengths and weaknesses of all the abovementioned animal welfare legislation. Such result of analysis may further improve the Prevention of Cruelty to Animals Act 1986 (Victoria in Australia) where new addition, deletion, modification etc to suit the need of Victorian state legislations in Australia may also be proposed to Victorian parliament in Australia. In addition to the legislation approved by state parliament in Australia, various journals related to animal legislation in Australia, particularly related to animal welfare in Victorian state, may be read through. [24] Example provision of Western Australian animal welfare legislation, Animal Welfare Act 2002 (Western Australia of Australia) section 20 - 30 (Part 3 - Offences against animals), that provides conditions that animals may be killed for certain exceptional conditions, that are not stated in Prevention of Cruelty to Animals Act 1986 (Victoria in Australia). Please kindly reminded the updated laws statement in the proposal is derived from the reference www.austlii.edu.au.

CONFLICT IN COMMON AND RELIGIOUS LAW OF AUSTRALIA ABOUT ANIMAL SLAUGHTERING FOR FOOD

In multicultural societies of Australia, the rights to practise and share in the cultural traditions and languages should always be respected. Certain religious traditions have very specific requirement in the preparation of food derived from animals. There is no such conflict of the preparation of foods derived from animals for vegan and less problems could be encountered in the food preparation for vegetarians when there exists no issues in the food preparation of their meal having no meat. For Islamic and Jewish religious traditions, the production of halal and kosher meat requires the cutting of an animal’s throat while the animal is fully conscious and then permitting the animal to ensanguinate. [25] Contradictory to the abovementioned Jewish and Islamic religious practises, federal Australian Commonwealth Codes and Standards requires the sheep and cattle to be insensible or unconscious when such animals are killed, in the viewpoint of animal welfare and rights with humanitarian, in order to minimize the suffering associated with the slaughter process. In other words, the animals are required to be pre-stunned before they are slaughtered. [26] Such conflict has created certain unavoidable problems to the practitioners of certain religions, especially among the Jewish and Muslims in Australia, in the preparation and consumption of kosher and halal meats where the compliance with the civil laws may be contradictory to the religious legislation, so as the vice versa cases. There is not surprising for such dilemma to occur in
the minority community of Muslim and Jewish in Australia, that is resided and ruled mainly by the Christians though all such religions of Judaism, Christianity and Islam are originated in the Middle East close to each other but have slightly different perception on the animal rights and welfare, during the slaughtering process. In the viewpoint of the author of this article, the best remedies to reduce suffering of such animals are the total prevention of cruelty to animals, by not touching, eating or slaughtering them. Loving kindness to animals should be equal to loving kindness to human being. Modern human societies have human rights protected by various equal opportunity legislation, so as the animals that in fact should be protected by animal protection legislations. As the situation of human rights standards, different political countries, societies and communities may have different parameters and standards in the judgment of human rights. Conflicts in the human rights standards perception and judgment have also existed within human-based societies, especially between the human rights perception of the modern Western nations and the traditional Eastern countries. Such situation could also be similar in the animal rights protection. Whatever methods of animal slaughtering process applied and adopted, the animal may also die finally, but such unfortunate animals may undergo different processes of suffering when handled by different people of different cultural background. Statistical analysis in the trends of animal meat consumption in Australia has also shown significant increase. Meat and Livestock Australia also reported that “Over the 12 months to September 2010 fresh meat purchases increased three percent to about 133 millions serves / week.” Contributing to the trend was a rise in beef - by four percent, lamb - up two percent and chicken purchases up six percent to 52 million serves / week, 22 million serves / week and 38 million serves / week respectively. [27] The Australian Bureau of Statistics Livestock Product report for the September 2010 Quarter indicates that total red meat production in Australia increased by 2 % to 764000 tonnes of slaughtered meat compared with the previous quarter. [28] In term of export of Australian meat, the neighbouring nation Indonesia remains the largest importer of Australian live cattle. Such Islamic nation import almost 80 % of the Australian cattle in year 2001. In other words, most of the export of Australian cattle went to Indonesia. [29] Most of the meat exported by Australia to Muslim countries is the whole animals that are to be slaughtered according to halal procedures. Animal Australia has also reported that some 22 million sheep were being exported to Kuwait alone over the past 20 years, where the supply of Australian beef and sheep continued to grow throughout 2010, especially to the wealthy Islamic nations. According to Jewish tradition, the animal must be healthy before slaughter, and it must be killed by a trained Jewish male, called a “sochet”, using a single cut of a sharp knife, called a “cholet”. The cut must sever the carotid arteries; in practice animal anatomy dictates that the cut sever the esophagus and trachea as well. Of course, such a cut is also part of secular commercial slaughter. The critical difference is that animals slaughtered according to Jewish law cannot be stunned before slaughter. Muslim dietary law requires a similar method of slaughter though some Muslim authorities accept pre-slaughter stunning that is temporary. [30] Such method of slaughtering according to the sacred Jewish tradition is called “shechita”. In Islamic traditions, the Muslims are prohibited to eat the food that is not halal, where such food is inclusive of the meat that may not be processed according to Quran especially in slaughtering. Examples are stated in Sura 6 : 121 : “Do not eat any flesh that has not been consecrated in the name of Allah for that is sinful” and sura 6 : 119 : “How is it with you that you do not eat that over which Allah’s name has been mentioned, seeing that he has distinguished for you that which he has forbidden you unless you are constrained to it. Therefore : Meat which has not been properly slaughtered is declared haram because it is against Allah’s will to slaughter animals improperly.” Usually, the animals for food will be restrained by Muslims and a pray is blessed into the ear of the animal, then the throat is cut
and the animal is left to bleed to death. However, the pre-stunning of the restricted animal for food may or may not be available because there is no consistent agreement on whether such pre-stunning procedures are allowed before killing the animal for food according to Islamic traditions.

References:


(Total word count : around 7290 including the references)