Critical Thinking, Reading and Writing: Vital Skills for Honours Students

During the course of your law degree, you will have become familiar with variations on the standard answering technique for legal hypothetical problems: Identify the relevant law, apply the law to the facts, and come to a conclusion about your client's chances of success. In fact, this technique is essentially a formalised method of critical thinking. Strangely, however, when I have asked students in later years at Law School to write a critical analysis of an issue, many become confused, saying that they don't know how to do so, or that they 'did that stuff in arts' but have forgotten it. This problem can also be found in some honours students, who have difficulty in identifying (and subsequently arguing) their thesis or who become overwhelmed by information in their initial research.

The purpose of this session, then, is to encourage you to see critical thinking skills as something more than the standard answering method for legal hypothetical problems. These skills can be used not only in the preparation of your thesis but also in most other areas of your life. Critical thinking is valuable not only because there tends to be a high correlation between university success and outcomes of critical thinking tests, but also because critical thinking allows you to think for yourself: perhaps the true basis for a university education!

What is critical thinking?

Definitions of critical thinking vary. A very simple definition is that critical thinking is skilful thinking. We could elaborate on that to say that 'Critical thinking is skilful, responsible thinking that facilitates good judgment because it (1) relies upon criteria; (2) is self correcting; and (3) is sensitive to context'.

Alternatively, critical thinking has been defined as the process of 'purposeful, self-regulatory judgment, which results in interpretation, analysis, evaluation, and inference, as well as explanation of the evidential, conceptual, methodological, criteriological or contextual considerations upon which that judgment is based'.

Two comments are worth making about these definitions. Firstly, if critical thinking is skilful thinking, like other skills, it can be learned. It can also be lost if not used. The second point is that, looking at the last and most elaborate of the definitions, critical thinking is not a single function, but actually involves a series of processes: interpretation, analysis, evaluation, inference, explanation.

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* This paper is adapted from a paper originally written for the unit Industrial and Intellectual Property in 2000. Versions of the original paper have been used in the Metamorphosis Workshop and the unit Corporations Law.

1 'Critical Thinking: what can it be?' http://www.regent.edu/admin/inseff/crtthink.html

When we ask you to critically analyse a topic, we are not asking you to be ‘critical’ in the sense that we often use that word: that is, to be negative or pick out all the faults in something. We want you to be critically minded. You bring a critical minded approach to work whenever you analyse controversial issues for which there are no clear answers. In such cases, you must sort through the issues, find out what is in dispute, who is involved, what the arguments and the assumptions are. Perhaps most importantly, critical mindedness requires you not to take information at face value and to recognise that what you read, particularly in the media, may be shaped by groups with their own interests. It requires you to question the clarity, strength of reasoning, underlying assumptions and values, points of view and attitudes in information and then to evaluate conclusions and actions.

Critical thinking, then, is a combination of personal dispositions and skills. Studies have suggested that people who have well developed critical thinking skills tend to be truth seeking, open minded to divergent views, self confident in their own ability to reason, inquisitive, mature, flexible in considering alternatives and opinions, understanding of the views of others, analytic and systematic. At the same time their skills of analysis, evaluation, inference, and reasoning are strong. Critical thinkers are honest with themselves in facing their own biases and stereotypes; resist manipulation; try to overcome confusion; ask questions; base judgments on evidence; look for connections between subjects; become and try to remain well informed and are intellectually independent. Perhaps most importantly they are self reflective and willing to reconsider and revise views where honest reflection suggests that change is warranted.

A good critical analysis is not a mean spirited, fault finding, negative exercise. It is an attempt to examine the validity and expression of arguments, certainly, but not for the purposes of putting down someone else. It is an attempt to create a dialogue of ideas, meaning and discovery.

Critical thinking is often distinguished from other types of thinking, such as creative thinking (the sort of thinking that often characterises artists or musicians); kinetic thinking (the strategic thinking that athletes use); meditative thinking; and instinctive thinking (the thinking that we do when we are in life threatening situations). The following table contrasts critical thinking with so-called ‘ordinary thinking’. I am not sure how the authors would define ‘ordinary thinking’ but it certainly reveals the difference between critical and non-critical thinking:

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3. Vincent Ryan Ruggiero, **Critical Thinking**, cited by Vernellia Randall, Characteristics of Critical Thinkers [http://www.udayton.edu/~aeplonline/analytical.think01.htm](http://www.udayton.edu/~aeplonline/analytical.think01.htm)


5. Ibid

6. ‘Critical Thinking: what can it be?’ [http://www.regent.edu/admin/inseff/crtthink.html](http://www.regent.edu/admin/inseff/crtthink.html)
<table>
<thead>
<tr>
<th>Ordinary thinking</th>
<th>Critical thinking</th>
</tr>
</thead>
<tbody>
<tr>
<td>guessing</td>
<td>estimating</td>
</tr>
<tr>
<td>preferring</td>
<td>evaluating</td>
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<tr>
<td>grouping</td>
<td>classifying</td>
</tr>
<tr>
<td>believing</td>
<td>assuming</td>
</tr>
<tr>
<td>inferring</td>
<td>inferring logically</td>
</tr>
<tr>
<td>associating concepts</td>
<td>grasping principles</td>
</tr>
<tr>
<td>noting relationships</td>
<td>noting relationship among other relationships</td>
</tr>
<tr>
<td>supposing</td>
<td>hypothesising</td>
</tr>
<tr>
<td>offering opinions without reasons</td>
<td>offering opinions with reasons</td>
</tr>
<tr>
<td>making judgments without criteria</td>
<td>making judgments with criteria</td>
</tr>
</tbody>
</table>

A different table\(^7\) that I found claims that there are three primary areas in which to look for differences between critical and non critical thinking: in view of knowledge, views of thinking and strategies for thinking:

<table>
<thead>
<tr>
<th>View of knowledge</th>
<th>Critical thinking</th>
<th>Non-critical thinking</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Shades of grey -strive for depth</td>
<td>• Black and white: superficial level</td>
</tr>
<tr>
<td></td>
<td>• Interdisciplinary</td>
<td>• Not interdisciplinary</td>
</tr>
<tr>
<td></td>
<td>• Knowledge is open</td>
<td>• Knowledge is closed</td>
</tr>
<tr>
<td></td>
<td>• Intertwined with thinking</td>
<td>• Independent of thinking</td>
</tr>
<tr>
<td>View of thinking</td>
<td>• Rational and consistent</td>
<td>• Irrational and inconsistent</td>
</tr>
<tr>
<td></td>
<td>• Strives to learn HOW to think</td>
<td>• Strives to learn WHAT to learn</td>
</tr>
<tr>
<td></td>
<td>• Holistic/webbed</td>
<td>• Unidisciplinary/linear</td>
</tr>
<tr>
<td></td>
<td>• Original/insightful</td>
<td>• Second hand thinking</td>
</tr>
<tr>
<td></td>
<td>• Multiple frames of reference</td>
<td>• One or limited frame of reference</td>
</tr>
<tr>
<td>Strategies for thinking</td>
<td>• Suspends closure</td>
<td>• Strives for closure</td>
</tr>
<tr>
<td></td>
<td>• Explorer/probing</td>
<td>• Dogmatic/avoiding</td>
</tr>
<tr>
<td></td>
<td>• Questioning</td>
<td>• Doubting</td>
</tr>
<tr>
<td></td>
<td>• Fair-minded</td>
<td>• Egocentric/ethnocentric/ emotional</td>
</tr>
</tbody>
</table>

\(^7\) 'Critical vs non-critical thinking' [http://library.usask.ca/ustudy/critical/critnoncrit.html](http://library.usask.ca/ustudy/critical/critnoncrit.html)
<table>
<thead>
<tr>
<th>Collaborative/communal</th>
<th>Passive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Precise language</td>
<td>Authoritative</td>
</tr>
<tr>
<td>Vague language</td>
<td></td>
</tr>
</tbody>
</table>

Have you ever asked a lecturer in law ‘what’s the right answer?’; only to be told there was no right answer, only argument? If you look at the table above, you can see that your lecturer was trying to encourage you to think critically.

It is important to note that critical thinking may be holistic or context specific, depending upon the particular situation to which it is applied. It takes into account irregular or unusual circumstances and conditions; special limitations, contingencies or constraints; overall configurations; the possibility that some evidence is atypical; and the possibility that some meanings do not translate from one context or domain to another.8

The core cognitive skills in critical thinking

I want to look more closely now at the key cognitive skills in critical thinking: interpretation; analysis; evaluation; inference; explanation; and self-regulation.9

**Interpretation**

Interpretation has been defined as the ability ‘to comprehend and express the meaning or significance of a wide variety of experiences, situations, data, events, judgments, conventions, beliefs, rules, procedures or criteria’. It includes sub-skills of categorisation; decoding significance, and clarifying meaning. In a critical essay, your first step is often to define your key terms. This is a question of interpretation. In a hypothetical legal problem, your first step is often to determine just what it is you are asked to do: advise x, for example, or discuss Fred’s liability for negligence. You then identify the relevant areas of law and the relevant principles. These steps, too, are matters of interpretation.

**Analysis**

To analyse is ‘to identify the intended and actual inferential relationships among statements, questions, concepts, descriptions, or other forms of representation intended to express belief, judgment, experiences, reasons, information or opinions’. This is the ability to identify similarity and difference, claims and reasons, and the relationship between ideas. You have begun to develop your ability to identify similarity and

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8 “Critical Thinking: what can it be?” http://www.regent.edu/admin/inseff/crtthink.html
9 The definitions in the following are taken from Peter A Facione, ‘Critical Thinking: What it is and why it counts’, http://www.calpress.com/critical.html
difference between the facts of a hypothetical problem and the facts of authorities. You are also developing your ability, from reading judgments, to identify claims and reasons and the relationships between ideas.

**Evaluation**

Evaluation has been defined as the ability ‘to assess the credibility of statements or other representations which are accounts or descriptions of a person’s perception, experience, situation, judgment, belief or opinion; and to assess the logical strength of the actual or intended inferential relationships among statements, descriptions, questions or other forms of representation’. We evaluate when we judge varying interpretations, determine the credibility of a source of information; or determine whether the evidence at hand supports the conclusion being drawn. Obviously, there are skills you will be familiar with You use these skills to consider the weight of a persuasive authority, or to compare differing judgments in the same case or to assess assumptions underlying judicial statements.

**Inference**

We infer when we ‘identify and secure elements needed to draw reasonable conclusions; form conjectures and hypotheses; consider relevant information and deduce the consequences flowing from data, statements, principles, evidence, judgments, beliefs, opinions, concepts, descriptions, questions, or other forms of representation’. Sub-skills involved in inference include querying evidence, conjecturing alternatives, and drawing conclusions. You will have exercised this skill in a legal hypothetical when you predict how a legal principle will be applied to the hypothetical facts, or decide that you need specific information in order to ascertain X’s liability for trespass, or when you predict how a changed legal rule will affect a particular group of people.

**Explanation**

This has been defined as the ability ‘to state the results of one’s reasoning; to justify that reasoning in terms of the evidential, conceptual, methodological, criteriological, and contextual considerations upon which results were based; and to present one’s reasoning in the form of cogent arguments’. Sub-skills include stating results, justifying procedures, and presenting arguments. You do this (or at least you should do this) each time you answer a hypothetical problem. You will probably have been more alert to this,
however if you have been involved in a moot, where the structure of your argument must be made more overt and you are often asked to justify your claims.

Self regulation (metacognition)

This quality may not be, perhaps, as obvious to you when you consider the notion of critical thinking. It is the ability to ‘self consciously monitor one’s cognitive activities, the elements used in those activities, and the results educed, particularly by applying skills in analysis, and evaluation to one’s own inferential judgments with a view toward questioning, confirming, validation, or correcting either one’s reasoning or one’s results.’ Sub skills include self-examination and self-correction.

This capacity for self-reflection is vital in critical thinking. Critical thinkers must be aware of their own biases and stereotypes, and have the flexibility to adapt to new information or to adjust their views if those views can be shown to be flawed in some way.

Critical thinking and critical reading

I said earlier that critical thinking could be learned (and existing skills be improved). It is also the case that critical thinking skills can be brought to reading. Very often honours students complain to me that they have too much reading to do, and that they are overwhelmed with information. In many cases, this is because they are not used to applying a critical approach to their reading. A critical approach to reading is not only often extremely time effective, it can make the process of reading more enjoyable because you know the purpose behind your reading.

There are a number of strategies that can be used to encourage you to think and to read critically. One of the simplest ways is a three-step process of ‘depth dimension’ questions. This simple plan can be very helpful in distilling the essence of a reading.

Depth dimension questions

The first question is: WHAT? This question is content-based and is really a question of focus or intent: what is the point, the intended purpose of this paper/this class/this question.

The second question is: SO WHAT? This question requires you to consider the significance or the consequences of content.

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10 This scheme of critical thinking can be found in Russell Crescimanno, 'The Cultivation of Critical Thinking: Some tools and techniques' (1990) 6(1) VCCA Journal, 12-17, http://www.br.cc.va.us/vcca/cres.html
The third question is: SO WHAT NOW? This question invites you to consider the application of what you have learned to a course of action.

A more complicated approach is to utilise a number of questions that require you to apply the various cognitive processes of critical thinking: interpretation, analysis, hypothesis and evaluation. I have seen this same list of questions in a number of places, but I have taken these from Vernellia Randall’s law website: http://www.udayton.edu:

Summary and definition questions

• what is (are)...?
• who?
• when?
• how much?
• how many?
• what is an example of?

Analysis questions

• how?
• Why?
• what are the reasons for?
• what are the types of?
• what are the functions of?
• what is the process of?
• what other examples of?
• what are the causes/results of?
• what is the relationship between......and....?
• what is the similarity or difference between .....and?
• how does .....apply to.....?
• what is (are) the problems or conflicts or issues....?
• What are possible solutions/resolutions to these problems or conflicts or issues?
• What is the main argument or thesis of...?
• How is this argument developed?
• What evidence or proof or support is offered?
• What are other theories or arguments from other authors?

Hypothesis Questions

• if...occurs what happens?
• If...had happened, then what would be different?
• what does theory x predict will happen?

Evaluation questions

• is...good or bad?
• ..correct or incorrect...?
• effective or ineffective?
• relevant or irrelevant?
• clear or unclear?
• logical or illogical?
• applicable or not applicable?
• proven or not proven?
• ethical or unethical?
• what are the advantages or disadvantages of...?
• what are the pros or cons of...?
• what is the best solution to the problem/conflict/issue?
• what should or should not happen?
• do I agree or disagree?
• what is my opinion?
• what is my support for my opinion?

These questions should not be learned off by heart, nor should you try to answer every question for every reading that you do. Rather, when you read and summarise, you should take a question or two from each group, depending upon your purpose. So, in reading an article for your thesis you might build your summary around the following questions:

• What are the main issues addressed by the author?
• Who is the author (do they bring a particular perspective to the issue)?
• What reasons does the author give to justify their position?
What is the relationship between this article, and other material I have read on this issue?

If this author’s view is to be believed, what are the implications for my thesis?

What are the pros and cons of this view?

Many of you will already be using such a schema. But for those of you who consistently find yourself floundering in long and difficult readings, building your own system (and one that can be adapted to a wide variety of reading contexts) can be very worthwhile.

Critical writing

The final topic I want to address is critical writing. Most students I speak to are well aware that a good paper has a strong narrative structure: that is, it has a beginning, a middle and an end. Students are less clear, however, as to the content of that beginning, middle and end.

Essentially, good critical writing seeks to substantiate a claim, that is, an arguable statement. This is the conclusion and your thesis.

The conclusion, then is both the starting point and the ending point. In the introduction to your paper, you state your conclusion and the reasons for your conclusion. In the main body of your paper you give any necessary background information, and then work through stating and developing each of the claims that leads to the conclusion in turn. These are the reasons for your conclusion. Generally, arguments begin with well accepted claims and move on to less accepted claims.

Good critical writing, then, is made up by a series of claims: generally, a chain of premises makes up a claim, and a series of claims (reasons) justify your conclusion. Well-formed claims have a number of characteristics. Well-formed claims:

- State scope and certainty explicitly
- Purport to state the truth of what is or what ought to be
- Are relevant to a conclusion when they provide some basis on which to decide whether or not to accept that conclusion
- Are supported by authority or by reasons.

When you read a text, you are looking to see whether the scope of the author’s claims are valid; whether they are reliable and relevant; and to what extent they are supported, either by authority or reasons. Similarly when you write critically you should be checking that your claims are valid, relevant and supported.

Planning or reviewing for critical writing

This schema can be very helpful either for critical reading of colleagues’ work, or for reviewing or planning your own work. It is taken from Matthew Allen’s book, Smart
Thinking (Melbourne, OUP, 1997). Of necessity, this is a very truncated version of his ideas - the book is well worth reading.

Step 1:  Think about the conclusion

- What is the conclusion (your thesis)?
- What are its specific elements - meaning of words, key ideas, scope, values, certainty?
- Is it about the present, future or past?
- Does it require argument or explanation?
- How does it relate to existing conclusions about this topic?
- Is the conclusion well formed?
- What sort of evidence is necessary to support the conclusion?
- Is there more than one conclusion? If so can the conclusions be combined in some way?
- Is the conclusion about an event, decision or issue; or is it about the way others think, and write about such events, decisions, or issues?

Step 2.  Think about the reasons

- Why does, or should an event or idea under discussion occur or be believed?
- When does it occur?
- How does it happen?
- What does it mean that this event or idea occurs or is believed?
- What are or should be the consequences?
- Take each reason and expand into a chain of premises
- Do the reasons require definitions or framing premises?
- Is the relevance of the premises to the conclusion well established?
- Do the premises cover all the aspects of the conclusion?
- Are these premises well formed, with particular reference to the internal connections that they make?
- Are they well founded? If not, what support can be given?
- Are enough reasons given to meet the requirement for breadth?
- Are they expanded sufficiently to give depth to the argument or explanation?
• Is each idea in the conclusion referred to in some way in these premises?
• Are the premises grouped together properly?
• Think about the analytical relationships between the premises and the conclusion
• Do the premises show the cause of an effect? If so are the differences or similarities clearly stated?
• Do they state some generalisation that provides the knowledge we need about a specific conclusion? (If so is the specific case really a member of the category?)
• Do the premises draw together specific cases so as to make a generalisation? (If so are the specific cases representative of the general category?)
• Is it an analogical relationship? (If so are the events consistent with one another?)
• Is it reasoning from terms? (Are we making the particular meaning of the conclusion clear)

Step 3. Review

• What assumptions underlie the reasoning?
• Are there any implied premises?
• Is the relevance of each premise clear?
• Do they provide sufficient support to satisfy the burden of proof?
• Are all the claims well founded? (Self evidently/ with authority/ with proof)
• Are the claims clear and understandable?
• Is there coherence between the scope and certainty of premises and conclusions?
• What issues are not covered by the argument as it stands? (And should they be included?)
• Is it clear why some reasons are not being considered?
• Are the value judgments in this reasoning clearly outlined and argued for?

Conclusion

By now you will have realised that I have made a number of claims in this paper. I have claimed that critical thinking is a vital skill for honours students. I have also claimed that this is a skill that you already bring to legal problem solving, but can be used in a much wider variety of circumstances than hypothetical problem solving alone. I have claimed that critical thinking actually involves a series of cognitive processes, including interpretation; analysis; evaluation; inference; explanation; and self-regulation. I have claimed that critical thinking can be learned, improved, and its skills brought to both
reading and writing. A critical thinking approach can help you both in your background reading for the thesis and in the way in which you structure and argue that thesis. A critical thinking approach encourages you to engage in a dialogue with the ideas you encounter in writing a major piece of legal research, summarising, analysing, hypothesising, and evaluating information.