ENCOUNTER WITH PHILOSOPHERS IN THE CLASSROOM: THE WRATEC MODEL
OF COMMUNITY OF INQUIRY IN ACTION

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Abstract:
The WRATEC model offers a toolbox of effective strategies for helping teachers conduct a community of inquiry in the classroom, through structured discussion. WRATEC facilitates teaching and learning through a self-corrective framework by integrating the four dimensions of cognitive skills characterized by Mathew Lipman (1991)--that is, inquiry, reasoning, information-organizing and translation skills. WRATEC is an acronym for: "W" (What is the meaning of ..); "R" (exploring the reasons for the premises given that lead to conclusions); "A" (detecting assumptions within sentences or concepts formed); "T" (verifying the truth or falsehood of the conclusion or inference); "E" (providing examples in support of the truth or falsifiability of the assumptions); "C" (exploring alternatives or counter-examples for the relativity of contexts of meaning). The seventh step ("S") that concludes the process of the seven habits of effective thinkers (hence sometimes presented as WRATECS) lies in the skill of summarizing, which can also be expressed in written form. The WRATEC model offers an effective framework for the development of the cross-curricular competencies that inform intellectual, social and methodological skills. As is evidenced in the new education programs of several states or provinces, particularly in Canada, one of the priorities in teaching and learning programs is the development of such skills in the context of communal discourse and cooperative inquiry. The visual thought-map of WRATEC also makes it possible to trace progress in the breadth and complexity of ideas and the depth of inquiry in moving toward higher levels of generality, in ways that actualize the progress of inquiry as represented in the Platonic allegory of the cave--from opinion and belief to the examination of the validity of assumptions and the evaluation of the nexus of ideas involved in any given argument.

Keywords: WRATEC; Cognitive skills; Method of discussion; Community of inquiry;

Encontro com Filósofos na Sala de Aula: O Método *Wratec* de Comunidade de Questionamento em Ação

Resumo:
O método WRATEC oferece uma caixa de ferramentas de estratégias eficazes para ajudar os professores a conduzir uma comunidade de investigação na sala de aula, através da discussão estruturada. *WRATEC* facilita o ensino e a aprendizagem por meio de um marco autocorretivo ao integrar as quatro dimensões de habilidades cognitivas caracterizadas por Lipman (1991), a saber: a investigação, o raciocínio, a informação, a habilidade de organização e a de tradução. *WRATEC* é um acrônimo para: W (Qual é o significado de...); R (explorar as razões das premissas dadas que levam a conclusões); A (detectar os pressupostos assumidos em frases ou conceito formado); T (verificação da verdade ou falsidade da conclusão ou inferência); E (dar exemplos em apoio à verdade ou falseabilidade das hipóteses); C (explorar alternativas ou contra-exemplos para a

relatividade dos contextos de significado). A sétima etapa (S) repousa na habilidade de síntese (que pode ser expressa também na forma escrita) e conclui o processo dos sete hábitos de pensadores eficientes; daí por vezes ser apresentado como *WRATECS*. O método *WRATEC* oferece um marco eficaz para o desenvolvimento de competências interdisciplinares que compreendem habilidades: intelectual, social e metodológica. Como evidenciado nos novos programas de ensino de vários estados ou províncias, particularmente no Canadá, uma das prioridades dos programas de ensino e aprendizagem é o desenvolvimento de tais habilidades no contexto do discurso e da pesquisa cooperativa. O mapa visual de pensamento de *WRATEC* também torna possível traçar o progresso na amplitude e complexidade das ideias, e a profundidade da investigação movendo-a em direção a níveis mais elevados de generalidade, de modo a atualizar o progresso de investigação da Alegoria da Caverna de Platão, da opinião e da crença para o exame da validade dos pressupostos e o nexo de ideias aí envolvido.

Palavras-chave: *WRATEC*; Habilidades cognitivas; Método de discussão; Comunidade de investigação;

Encuentro con filósofos en el aula: el Método *Wratec* en Acción

Resumen:
WRATEC proporciona una caja de herramientas de estrategias eficaces para ayudar a los profesores a conducir una comunidad de investigación en el aula, a través de la discusión estructurada. *WRATEC* facilita la enseñanza y el aprendizaje a través de un marco auto-correctivo al integrar las cuatro dimensiones de habilidades cognitivas caracterizadas por Lipman (1991), a saber: habilidades de investigación, razonamiento, información y organización, y las de traducción. WRATEC es un acrónimo de: W (¿Cuál es el significado de ...?), R (explorar las razones de las premisas dadas que conducen a las conclusiones), A (detectar los supuestos de sentencias o concepto formado), T (verificación de la verdad o falsedad de la conclusión o inferencia), E (proporcionando ejemplos en apoyo de la verdad o la falsabilidad de las hipótesis), C (exploración de alternativas o contraejemplos para la relatividad de contextos de significado). La séptima etapa (S), que concluye el proceso de los siete hábitos de los pensadores efectivos (por lo tanto, presentado a veces como WRATECS) radica en la habilidad de resumir, que puede expresarse también en forma escrita. El modelo WRATEC ofrece un marco eficaz para el desarrollo de la las competencias transversales que comprenden las habilidades intelectuales, sociales y metodológicas. Como se evidencia en los nuevos programas de educación de varios estados o provincias, sobre todo en Canadá, una de las prioridades en los programas de enseñanza y aprendizaje de los programas es el desarrollo de tales habilidades en el contexto de una investigación discursiva y cooperativa. El mapa de pensamiento visual de WRATEC también hace posible rastrear el progreso en la amplitud, complejidad de ideas, y profundidad de la investigación avanzando hacia niveles más altos de generalidad, de manera que actualizan los avances de la investigación de la alegoría platónica de la caverna, desde la opinión y la creencia hacia el examen de la validez de los supuestos y el nexo de las ideas involucradas.

Palabras clave: *WRATEC;* Habilidades cognitivas, Métodos de discusión; Comunidad de Investigación;

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> « But the excellence of thought, it seems, is certainly
> of a more divine quality, a thing that never loses its potency but
> according to the direction of its conversion becomes useful and
> beneficent… »

Plato, *Republic*, VII, 518.d

Introduction

Critical Thinking Methodology and the Teacher's Role

Recent post-modern feminist conceptions have questioned the validity of the Euro-western paradigm which favours an argumentative rational-logical objective model. Thayer-Bacon (2001) proposes instead a "quilting model" of teaching critical thinking, which without necessarily implying "order or unity" describes a way of arriving at solutions by way of intuition, imagination or emotional feelings (Thayer-Bacon, p.10).

But doesn't the classroom teacher to be effective need to be guided by a framework or guidelines to keep the discussion coherent, productive and on target? In the view of this researcher and teacher trainer, without an effective orderly procedure that develops higher order skills along the lines of an inquiry, as co-inquiry, characterized by intellectual rigor and self-corrective components, the criteria of deciding whether or not a discussion is successful are difficult to establish, especially if classroom discussions are to be monitored and assessed in view of the major aims of education. Even practitioners of the philosophy for children program who conceive like Lipman of philosophy in Heraclitean metaphors as a moving river of a thousand and one currents, in which each person learns to sails as he/she can , recognise that steering well a sailboat demands artful skill and good judgement. (Sasseville, p.9).

In fact, one the central tasks of Sasseville's book *The Practice of Philosophy for Children (La pratique de la philosophie pour enfants*) (1999) edited with contributions from Lipman and other practitioners is to teach citizens the art of reasoned judgement through critical and creative thinking for living in a democracy beyond the " half-baked dualisms which make, according to Lipman, education counter-productive and problematic." (Sasseville, pp.9-10). Hence the importance of ensuring that the teacher, by discerning observations of the discussion process and repeated practice be able to construct the community of inquiry. The considerations that Sasseville suggests for guiding discussions which foster critical thinking are: 1) providing criteria and reasons, 2) posing questions that develop critical though sensitive to context and 3) providing activities that facilitate self-corrective thought (Sasseville (1999) pp-157-161).

What remains unattended, however, from Sasseville's account is the teaching procedure or the operational framework that would help one manage in a time, sequence and step by step manner classroom discourse. What is missing, in other words, is a procedure that would allow collaborative dialogue and participation permitting meta-cognitive individual and group assessment in a democratic manner within the confines of time allotted. Sasseville position with regards to any directives is that the voyage or experience is more important that arriving at a specific destination. Yet as underscored by John Glover in *Cognitive Psychology for Teachers* (1990) it is important to pay heed to managing effectively classroom talk and developing thematic conversational skills. Without such considerations it is difficult to control the quality of discourse, stay on topic, measure results and the teacher's efficacy at helping students make best use of their metacognitive skills at constructing meaning. Building on Stubbs' work *Discourse Analysis* (1983) Glover proposes six ways a teacher may succeed at managing classroom discussions: 1) paying attention to what is said, 2) controlling the amount of speech, 3) checking understanding constantly, 4). summarising by restatement and paraphrase, 5) defining what does it mean and

6) .correcting student errors (Glover, 1990, pp. 204-207)

In the experience of this practitioner an effective model for the teaching of critical thing through classroom discourse must ensure that every student is able to connect with the topic having an opportunity to contribute and be recognised in the process. A successful philosophical methodology must only raise the level of discussion beyond mere opinions in the direction of the search of definitions and assumptions, but must show how can this be systematically accomplished with the whole class contributing to the inquiry process.

In other word, the cultivation of critical thinking discussions should benefit from a methodology of dialogue moves that ensure progress is made along the lines of higher generality and argument within the context of the social experience of the community of inquiry. inquiry. The discussion process cannot be applied randomly by merely distributing the dialogue among participants, in a patch work or hodgepodge manner. Students need not only to develop co-operative skills but a functional model of group discourse to manage the varieties of cognitive skills while conducting inquiry sequentially, in breadth and depth. As has recently noted by Michel Tozzi (2004) what is needed is an ordered framework for engaging in a discerning debate that is both democratic and philosophically sound, what he calls "discussion à visée philosophique" (DVP), satisfying the three criteria or pillars of dialogue "*problematisation, conceptualisation and argumentation".* The DVP discussion avoids both doxology and demagogy. It ensures progress in deepening students' understanding of the complexity of the issue with attentions to different perspectives (epistemic, ethical , metaphysical or aesthetic) that shed light on the debate keeping the inquiry process open along Socratic *apoeretic* lines of questioning.

Students need help in being taught how to recognise, use, and internalise the thinking skills, thus achieving competence in the art of steering correctly the wheel of judgement. Practitioners of the Philosophy for Children Program (P4C) know that critical thinking is the result of making good decisions in assessing

claims from true premises to sound conclusions . The wheel of judgement, as Lipman indicates in *Thinking in Education* (1991), comprises the following three categories of judgement making:

a)judgements of identity (ex. analogical, hypothetical value, appropriateness, factual)
b) judgements of difference (ex. division, instrumental, spatio-temporal) and
c) judgements of similarity (such as composition, inference, relevance etc.).
(Lipman, 1991, p.170)

Finally, no model of critical thinking can avoid reference to standards. Standards are required for monitoring classroom thinking if students' cognitive skills are to be strengthened and improved in producing fruitful discussions. The variety of cognitive skills involved in critical thinking is according to Lipman of four kinds:

1. *Inquiry skills*, involve skills for considering alternatives and constructing hypotheses. They provide the self-correctives tools for responsible thinking

2*. Reasoning Skills* comprise largely the logical inferential skills by means of which we assess the validity of arguments and extend the knowledge that we know and defend it. The vitality of reasoning is closely connected to the nature of dialogue.

3. Information –organising skills help us process units of information into clusters or webs of meaning to formulate and express what we know by means of concepts and schemas. Sentences are the basic contexts of meaning. They help us master and organise the informational content of experiences. Reasoning being constituted by the relationship of these sentences.

4. Translation skills carry over meanings from one symbolic scheme or context to another, making interpretation possible, thus preserving meaning.
(Lipman,1991, pp 40-44).

Visual Organisers and Thinking-process maps

Visual representations such as thinking process-maps and graphic organisers are translation skills that help students become fluent with patterning information and capturing their own thinking processes. These visual tools also

enable students to reflect back on their ideas, refine them and get feed back.   An example of these thinking maps and organisers is David Heyrler's (Heyerler,1996) eight - synthesis model that combines creative thinking and organisational structure webs. These visual organisers are effective tools for representing analogies, cause and effect, sequencing, whole/part, compare and contrast, describing qualities and context/frame of reference.

As Costa and Kallick report, recent research on visual language has proven to activate habits of mind and metacognition – in addition to " reflect common patterns of thinking from fundamental cognitive skills such as comparison, classification, and cause –effect reasoning to integrate visual language such as concept mapping (Costa & Kallick, 2000). Most importantly, when used on a blank piece of paper or on a chalkboard or with a thinking maps technology software, these visual organisers support interactive teaching. They are effective to identify patterns of higher order thinking, learning, and assessing across linear and non-linear patterns of knowledge" (Costa & Kallick, 2000, pp. 52-53).

Being philosophically self-effacing

As in socio- constructivistic inquiry classrooms the teacher role is to act as a midwife of ideas. The procedure that organises visually the verbal discourse of the group does not impose any content or ideas. It only helps the teacher to remain pedagogically firm while being " philosophically self-effacing" to allow the democratic input of students' ideas. When needed, to assist resolves a conceptual blockage, the teacher may as part of the community of inquiry contribute and share his/her wisdom.   Moreover, the methodology for orchestrating group discourse should respond to different styles of learning (auditory and visual) and frames of mind (Gardner, 1999). Being philosophically self-effacing does not mean compromising the rigor of analysis or monitoring depth and breadth of inquiry . It   restrains the teacher from imposing

dogmatically his/her views instead of responding to the needs and interests of participants. Being part of the community of inquiry, the artful teacher stimulates the community by questions and discussion moves that help the community construct meaning in connection with their discoveries and own lived experience

The implementation of these above criteria, standards of critical thinking and teaching procedures for managing discourse in the construction of the community of inquiry is what the WRATEC model has been designed to achieve. Developed after many years of practice and validated in empirical research and in teacher education training courses, WRATEC has the advantage of offering a visual organiser that maps concepts and provides a diagrammatic sequence of the flow concept mapping, problem solving and argument links of the discussion so that reasoning may be monitored and assessed from beginning to end.

The WRATEC model is a holistic procedure for discussing topic or constructing argument that stimulates a process of critical thinking along seven progressive levels of inquiry culminating with a synthesis and application.. As a model of a community of inquiry for constructing and evaluating one's worldview it provides also an opportunity to build a "community of virtue" by offering a frame of reference developing the intellectual dispositions or habits of thinking for acting wisely.

The 7 habits of effective thinkers: The WRATEC model of critical inquiry through guided discussion

The WRATEC model offers a toolbox of effective strategies for helping teachers conduct a community of inquiry in the classroom, through structured discussion. WRATEC facilitates teaching and learning through a self- corrective framework by integrating the four dimensions of cognitive skills characterised by Lipman (1991), that is, inquiry, reasoning, information -organising and translation skills.

Most importantly, WRATEC (or The Adventures of WRATEC when used as game)* provides a step by step flexible procedure for conducting inquiry designed to move the   discussion to higher levels of generality   in convergent and divergent ways from the eliciting of views to the contemplation of alternative views or counter-examples to the claim held, ending with a summary that applies the insight to one's life. As such, WRATEC is a procedure that meets the requirements   of what Beyer (1988) calls   "a sequential development of a problem solving strategy" . WRATEC enables both students and the teacher to   carry out a planned   discussion /solution strategy . The WRATEC process incorporates the steps of representing the problem, evaluating results in terms of making and testing hypotheses using a diagram or thought-process map, which enables one to work forward 'and backward if needed, to check the solution strategy and outcomes achieved (Beyer, 1988, p.202).

WRATEC is an acronym for :

W (What is the meaning of ..) clarification of the claim or concept , removing ambiguities

R (exploring the reasons for the premises given that lead to conclusions)

A (detecting assumptions for sentences or concept formed , establishing the contexts of meaning ,

T (verifying the truth or falsehood of the conclusion or inference based on the assumption)

E (providing examples   in support of the truth or falsifiability of the assumptions

C (exploring alternatives or counter examples for the relativity of contexts of meaning .

The seventh step (S) that concludes the process (hence sometimes presented as WRATECS) lies in the summarising skill, which can be expressed also in a written form by completing the student's WRATEC journal entries.

WRATEC AND WRAITEC: The good thinker's tool kit

An effective adaptation of the WRATEC model as a helpful device designed to facilitate the process for doing philosophy in order to develop "higher order thinking" has been accomplished by Professor Thomas Jackson in The " Good Thinker's Tool Kit : WRAITEC (1989) (See *Philosophy for Children: .A Guide for Teachers* (unpublished manuscript, Hawaii 1989 and "The Art and Craft of Gently Socratic Inquiry" in *Developing Minds,* 3rd Edition (2000) pp-161-181). The "Kit" that the teacher and each student make consists of seven letters W-R-A-I-T-E-C represents the following cognitive skills or philosophical moves:

W (what do you mean..? What is the problem? What is going on here" What have I forgotten to ask ?)

R (Are reasons being offered to support claims?)

A (Are we aware of and identifying key assumptions being made?)

I (Are we aware of inferences being made and possible implications of what is being said?)

T (Is what is being said true? How could we find out?)

E (Are examples being given or is EVIDENCE being offered to support or illustrate claims)

C (Are there any counter-examples to the claim being made?)

As is manifest,   Professor Jackson expands on the step involved in considering assumptions by adding the letter I after the A in order to represent the cluster of skills of the "If..then's", inferences and implications.

" IF , for example we do or don't pursue a particular line of action , THEN what follows? What are the consequences? ..Inferences basically have two parts: a STARTING POINT (something seen, heard, smelled, tasted or touched) and an ENDING POINT (a "place" the mind "moves" to that is beyond what was presented at the STARTING POINT" (Teacher's Guide (1989), p.25)

One important difference, however, between WRAITEC and WRATEC is

the   diagram thought-process WRATEC illustrates the discussion moves and contribution of each member of the group, with visual tools that enable one to represent the links made , in such as manner as enable one ,as Beyer says , "to work forward 'and   backward if needed,   to check the solution strategy and outcomes achieved" . This thought-proces map of WRATEC is a valuable tool for assisting in the process of self-correction and metacognitive . It also as we mentioned provides a faithful schema or representation   for preserving the argument steps needed for elaborating the argument in writing .

The visual thought-map of WRATEC also makes possible to trace the progress in the breadth , complexity if ideas, and depth of inquiry moving toward the higher levels of generality, in ways that actualize the progress of inquiry of the Platonic allegory of the cave, from opinion and belief to the examination of the validity of the assumptions and the nexus of ideas involved. For a dramatisation of WRATEC in the context of a novel making use of Plato's allegory of the cave see this researcher's novel *Out of the Cave* (1989) or more recently *La caverne et l'ange gardien* (2004) . In this latter work WRATEC is presented under the acronym PHILOS (Proposition, Hypothesis, Inference stemming from the assumption, Lumen for throwing light on the truth or falsity of the assumption, Objection and Synthesis). PHILOS is also elaborated in relation to multiple intelligences, including the 9th intelligence, the existential or philosophical intelligence that makes one Big Questions smart.

Another difference between WRATEC and the version presented by Professor Jackson relates to the particular order or the way the methodological structure or the thinker's tool kit is used. In the original model of WRATEC the discussion tools are   actualised moving from several opinions or views to scratching beneath the surface for uncover and test validity the assumptions made. In this regard although " not every discussion will involve all of the components ", since one may run out of time before covering all the elements of the argument, we are of the view that the seven steps of WRATEC allow one to

make progress in seeing the whole picture., not losing the forest for the trees. Not using the components of WRATEC "in any particular order"

(Teacher's Guide (1989) p.27) may makes it pedagogically difficult to consider examining a counter-example before considering the example we are trying to counter and in support   of what claim   the example was offered. Without being overly insitant on accomplishing all the elements of the process-map at any given time, in exclusion of other activities and exercices, it is important   that the structure of an argument be respected and that student develop the habit of considering as much as possible all aspects of the issue .

WRATEC and Cross-Curricular Competencies

The WRATEC model offers an effective framework for the development of   the cross-curricular competencies that comprise intellectual, social and methodological skills. As is evidenced in the new education programs of several states or provinces, particularly in Canada , one of the priorities in teaching and learning programs is the development of such skills in the context of discourse and cooperative inquiry A case in point is .the new Quebec Education Program (2001, 2004) « *Programme de formation à l'école québécoise*).

The four main domains of cross-curricular competencies identified are:

Intellectual cross-curricular competencies (information -organising skills, problem solving, critical judgment, and creative thought at exploring relevant alternatives),

Methodological cross-curricular competencies (providing effective habits of mind for attending to the tasks by using thinking-process maps)

Personal and social cross-curricular competencies (structuring one's thinking in co-operating with others)

Communicative cross-curricular competencies (expressing and communicating one's thought in an appropriate manner).

The WRATEC model provides a practical framework and effective toolbox for implementing in a progressive manner strategies which enhancing the development of these four cross-curricular competencies , through the fostering of the following essential skills that the QEP has identified : a) recognising and defining ideas (and beliefs), b) assessing what impedes or facilitates reflection c) figuring out or constructing collaboratively answers to questions, d) listening by taking into consideration other's point of view, d) identifying reasons and distinguishing justifies from unjustified claims, e) assessing the relevance of ideas, of examples or generalisations, f) applying critical and creative thinking by considering counter-examples and alternatives by considering the context . « *MEQ,* 2001).

The cognitive and argumentative strategies of WRATEC are explicitly made operational in the context of classroom discussion guided by the teacher.

B. From theory to practice: The WRATEC model in action

1. The context:

 In what follows we shall offer a demonstration of the effectiveness of the WRATEC model by presenting a transcript of a Master Class lead by Margaret Rose from the St-James Assinoboia School District No.2 in Winnipeg, with the participation of professional philosophers. The session represents a unique memorable event in that it brings into dialogue and lively discussion professional philosophers and teenagers at the Junior High School level, during a special session held at the meetings of the annual convention of The Canadian Association of Philosophy, in Winnipeg in May 1986.   The teacher Margaret Rose had followed   an introductory intensive workshop with Dr. Ghanotakis, from the Canadian Institute of Philosophy for Children, in the teaching of critical thinking and dialogue skills in February 1986.

 The professional development practicum course modelled on a graduate Course the author taught at OISE (Ontario Institute of Studies in Education of

the University of Toronto entitled Philosophy for Teachers) and was offered as part of the School Board's mandate to provide the infusing of critical and creative thinking skills across the curriculum as part of the Language Arts program.. The demonstration was arranged in order to provide an opportunity for professional philosophers , curriculum supervisors and teacher trainers to assess the effectiveness of teaching critical thinking through the WRATEC model at the school level in the framework of co-operative inquiry.

2. Structure of the session:

 A- before the Reading: Introductory warm up activity

B-Reading

C- After the Reading:: Students' questions and comments

D- Voting or determining ideas and topic to be discussed

E- Dialogue/Inquiry: Using the WRATEC discussion tool kit

F-Evaluation.

The Master WRATEC Class in action

A. Before the Reading . Warm Up Activity : "All statements"

 Introductory critical thinking co-operative activity

Groups of four are formed, comprising philosophers and students. Each group is given three pictures of Canadian famous people featured in an article from a popular magazine. First, each group must find what is similar in all the pictures. Then the group must attempt making inferences to construct a sentence that conveys a generalisation in the form of an "All Statement". An "All statement" is a statement that contains a subject, a verb and a predicate. For example "All these men are people who wear shirts."

Teacher: Let's try some other possibilities. They are famous, aren't they?

One group offers a suggestion: " All the people in the pictures are Canadians"

1st Philosopher: Do the statements have to be necessarily true?

Students: Yes, they do.

1st Student: All these Canadians have outstanding skills.

2nd Student: All these Canadians are involved in entertainment.

Teacher: (Picking up the contribution of the group and writing on the board the various "All statements" expressed.)

"We will get back to the "All Statements" in an attempt to make a generalisation. Let us turn now to the reading from Harry , that is from the novel by Matthew Lipman: *Harry Stottlemeir's Discovery*", .Chapter I.

Harry is a boy we are about to meet. We will read in turn two to five lines each, starting from the back of the room. As we read, try to jot the ideas that seem interesting to you.

B. Reading   : Chapter 1 of *Harry Stotllemeir's Discovery*

(For variation, the reading is also done by students' role playing).

"It probably wouldn't have happened if Harry hadn't fallen asleep in science class that day. Well, he didn't really fall asleep either. His mind just wandered off. The teacher, Mr. Bradley, had been talking about the solar system, and how all the planets revolve around the sun, and Harry just stopped listening, because all at once he had the picture in his mind of the great, flaming sun and all the little planets spinning steadily around it.

Suddenly, Harry knew that Mr. Bradley was looking directly at him. Harry tried to clear his mind so that he could pay attention to the words of the question: "What is it that has a long tail and revolves around the sun once every 77 years?"

Harry realised that he had no idea of the answer Mr. Bradley expected. A long tail? For a moment he played with the idea of saying "a Dog Star" (He had just read in the encyclopaedia that Sirius was called the " Dog Star") but he was afraid Mr. Bradley wouldn't find such an answer amusing.

Mr. Bradley didn't have much of a sense of humour, but he was extremely patient. Harry knew he had a few moments, which might be just enough time to figure out something to say. "All planets revolve around the sun," he recalled Mr. Bradley saying. And this tail, whatever it was, also goes around the sun. Could it also be a planet? It seemed worth a try. "A planet?" he

asked rather doubtfully.

He wasn't prepared for the laughter from the class. If he'd been paying attention, he would have heard Mr. Bradley say that the object he was referring to was Haley's comet and that comets go around the sun just as planets do, but they are definitely not planets.

Fortunately the bell rang just then, signalling the end of school for the day. But as Harry walked home, he still felt badly about not having been able to answer when Mr. Bradley called on him.

Also, he was puzzled. How had he gone wrong? He went back over the way he had tried to figure out the answer. "All planets revolve around the sun," Mr. Bradley had said, very distinctly. And this thing with the tail also revolves about the sun, only, it isn't a planet.

"So there are things that revolve around the sun that aren't planets," Harry said to himself. "All planets revolve about the sun, but not everything that revolves about the sun is a planet."

And then Harry had an idea. "A sentence can't be reversed. If you put the last part of a sentence first, it no longer is true. For example, take the sentence, "All oaks are trees." If you turn it around, it becomes "All trees are oaks." But that's false. Now, it's true that "All planets revolve around the sun." But if you turn the sentence around and say "All things that revolve about the sun are planets," then it's no longer true-it's false!"

His idea so fascinated him that he decided to try it out with a few examples.

First the thought of the sentence, "all model aeroplanes are toys." I guess that's true, he reflected. Now let's turn it around: "all toys are model aeroplanes." When reversed, the sentence was false! Harry was delighted!

He tries another sentence: "all cucumbers are vegetables." (Harry was particularly fond of cucumbers.) But the reverse didn't follow at all. All vegetables are cucumbers? Of course not!

Harry was thrilled with his discovery. If he'd only known it this afternoon, he might have avoided that awful embarrassment!

Then he saw Lisa.

Lisa was also in his class at school, but somehow he didn't think she had been one of the kids who had laughed at him. And it seemed to him that if he told her what he'd found out, she'd be able to understand.

"Lisa, I've just had a funny idea!' Harry announced rather loudly.

Lisa smiled at him and looked at him expectantly.

"When you turn sentences around, they're no longer true!" Harry said.

Lisa wrinkled her nose. "What's so wonderful about that?" she asked.

"Okay," said Harry, "give me a sentence, any sentence, and I'll show you."

"But, what kind of sentence?" Lisa looked doubtful. "I can't just think up any old sentence offhand."

"Well," said Harry, " a sentence with two kinds of things in it, like dogs and cats, or ice cream cones and food, or astronauts and people."

Lisa thought. Then just as she was about to say something, and Harry was waiting impatiently for her to come out with it, she shook her head and thought some more.

"Come on, two things, any two things," begged Harry.

Finally Lisa made up her mind. "No eagles are lions," she announced.

Harry pounced on the sentence the way his cat, Mario, would pounce on a ball of string that had been rolled towards him. In an instant,

Harry had the sentence reversed: " No lions are eagles.' He was stunned. The fist sentence, "No eagle are lions," had been true. But so was the sentence when reversed, for "No lions are eagles" was also true!

Harry couldn't understand why it hadn't worked. "It worked before…" he started to say aloud, but he couldn't finish the sentence.

Lisa looked at him wonderingly. Why had she given him such a stupid sentence? Harry thought, with a flash of resentment. But then it occurred to him that, if he had really figured out a rule, it should have worked on stupid sentences as well as on sentences that weren't stupid. So, it really wasn't Lisa's fault.

For the second time that day; Harry felt that he had somehow failed. His only comfort was that Lisa wasn't laughing at him.

"I really thought I had it," he said to her, "I really thought I had it."

"You tried it out? She asked. Her grey eyes, set wide apart, were clear and serious.

"Of course. I took sentences like "All planets revolve around the sun,' and 'All model aeroplanes are toys,' and 'All cucumbers are vegetables,' and I found that when the last part was put first, the sentences were no longer true."

"But the sentence I gave you wasn't like yours," Lisa replied quickly. "Every one of your sentences began with the word 'All.' But my sentence began with the word 'No'."

Lisa was right! But could that have made the difference? There was only one thing to do:

try some more sentences that begin with the word 'No.'

"If it's true that 'No submarines are kangaroos,' Harry began, "then what about 'No kangaroos are submarines,"

"Also true," replied Lisa. "And if 'No mosquitoes are lollipops,' then it's true that 'No lollipops are mosquitoes'."

"That's it!" said Harry, excitedly, "That's it! If a true sentence begins with the word ' No,' then its reverse is also true. But if it begins with the word 'All,' then its reverse is false."

Harry was so grateful to Lisa for her help that he hardly knew what to say. He wanted to thank her, but instead he just mumbled something and ran the rest of the way home.

He made a bee-line for the kitchen, but when he got there, he found his mother standing in front of the refrigerator talking to her neighbour, Mrs. Olson. Harry didn't want to interrupt, so he stood there for a moment, listening to the conversation.

Mrs. Olson was saying "Let me tell you something, Mrs. Stottlemeir. That Mrs. Bates, who just joined the PTA, every day I see her go into the liquor store. Well, that makes me wonder whether Mrs. Bates is, you know…"

"Whether Mrs. Bates is like them?" Harry's mother asked politely.

Mrs. Olson nodded.

Suddenly something in Harry's mind went "CLICK!"

"Mrs. Olson," he said, "just because, according to you, all people who can't stop drinking are people who go to the liquor store, that doesn't mean that all people who go to the liquor store are people who can't stop drinking."

"Harry," said his mother, "this is none of your business, and besides, you're interrupting."

But Harry could tell by the expression on his mother's face that she was pleased with what he'd said. So he quietly got his glass of milk and sat down to drink it, feeling happier than he had felt in days."

(Matthew Lipman, *Harry Stottlemeir's Discovery*, IAPC, Montclair, New Jersey, 1974, pp.1-4.)

C. After the Reading : Picking up Students' questions and comments

(we will indicate in italics and between parenthesis the skills and habits of mind practiced)

1. *Identifying points of interest and prioritising*

Teacher: Very good reading, everybody! If you haven't got an idea yet to start with, perhaps you can take one minute to identify a question about which we could have a fruitful discussion. Then, turn to the person next to you to compare notes and see if you make a suggestion for class discussion.

2. *Students comparing notes, participating in idea selection, teacher facilitating* consensus seeking

Teacher: Now each group of two turn to another group of two and compare two ideas you have selected and see if you can choose one idea that you would like to suggest for the class to discuss first. Groups must choose a spokesperson to report on the idea the group chose.

3. *Ideas recorded and setting the agenda for discussion*

First group of students: 1. Not all people who go to the liquor store are people who can't stop drinking.

Teacher: What interested you about this idea?

1rst Student: Harry telling Mrs. Olsen that just because Mrs. Bates went to the liquor store she is not a drinker.

Teacher: (Rephrasing/ restatement) Can you put that in another way Debbie, what the group stated?

Debbie: Harry was thinking about the word "all"and the way logical rules work.

Teacher: (making distinctions, eliciting view): So, that Harry used a rule. Did you find it interesting that he used the rule with his mother or just the rule itself?

4th Student: The fact that he used the rule, that he could jump into the discussion.

Teacher: Where in the text can you locate this idea?

4th Student: p.4 line .20

Teacher: May I have another group's contribution?

2nd Philosopher: 2. The fact that the rule Harry first discovered doesn't work with

stupid sentences.

Teacher: (seeking clarification and restatement) Can you put that in other words?

2nd Philosopher: How about, the rule has to work for all sentences at the same time?

Teacher: You mean a rule is a rule?

2nd Philosopher: Yes.

*Teacher: (Requesting justification, proof)*The ideas that a rule is a rule, where is it in the text?

2nd Philosopher: Page 3, line 12.

Teacher: Other ideas of interest?

3rd Philosopher: Exception to the rule. Harry finds a rule and there are exceptions.

Teacher: Let's write this out. OK. (eliciting views) Anyone else has another idea of interest?

5th Philosopher: On page 4, line 8, the word "all" can admit sentences that are true and the reverse is false. And, that's the exception.

Teacher: (Requesting inference from what is suggested) So the reversibility of sentences is the exception perhaps?

5th Philosopher: Well, trying to find "all sentences" where the reverse may be false.

Teacher: You mean, testing the rule?

5th Philosopher: Yes, testing the statement.

Teacher: In comparison with other times that we've read this text, we have come up with some very new and different ideas. We had, in addition to the topic of reversing statements, daydreaming. Now, to discuss the topic we use the WRATEC model of inquiry as a complement to discussion plans and exercises in the manual (for *Harry Stottlemeir's Discovery*). This is the format we follow. We choose an idea for the day and then go through the structured discussion, following George Ghanotakis' community of inquiry WRATEC model. Then, after systematic reflection by the whole class, students draw generalisations. If your selected idea was not hit upon that specific day, we will return to it at a later time.)

Teacher: (synthesizing the main ideas recorded)   So Let's look at what we' got today

as interesting ideas for discussion.

   1. <u>No statements (in relationship to Harry's rule).</u>   2. <u>Exceptions to rules.</u> 3. <u>Testing rules.</u> 4. <u>Use of rules.</u> 5. <u>And perhaps, daydreaming in class</u> (as having led Harry's discovery.) You can see that it is amazing what students pick up in terms of content. They don't go just for character analysis; they are interested in the logic of thought behind it.

(*explaining   the process*) So as we are doing this, I will be passing out Dr. Ghanotakis diagrammatic model of critical inquiry. We will work through a topic by following a process of inquiry and going through it "philosophically".

2nd Philosopher: Do students have different sheets for each topic?

Teacher:: Yes they do. They have also a yellow sheet that they use to summarise what was discussed according to the WRATEC model (transferring skills from discussion into writing out an argument). So for instance, I have brought an example of the results of the discussion on daydreaming.

 (*anticipating outcomes*) I'll ask John to read his WRATEC summary of daydreaming.

John: Daydreaming has been considered as one having thoughts on a topic of one's own. The reason for daydreaming is that you may be excited about some event of importance. The assumption here could be that people find joy in rehearsing their thoughts before taking action. The examples that were given were gymnastics competitions. Counter-examples were pressure situations where no joy is experienced in rehearsing. The generalisation that might be drawn is: If people are planning a task, then they may tend to daydream about it

Teacher: (*clarifying task*) As you see, we took the idea of daydreaming and discussed it in the form called WRATEC.

D- Voting or determining ideas and topic to be discussed

 Teacher: OK. Now, what ideas amongst the ones on the board would you like us to discuss first?

6th Student: A rule

Teacher: Let's see how many of you are interested in this question (the majority of participants raise the hand)

E- Dialogue/Inquiry: Using the WRATEC discussion tool kit

Teacher: A rule. OK. Let's follow WRATEC

WRATEC STEP 1 :W (clarifying the meaning of the concept or opinion.)

Teacher: The firs Step is W. We'll get some opinions about the meaning of a rule. What is a rule? I see someone raising his hand, Aha!

7th Student: Giving rules is creating an order, so to speak. A rule is an order you can understand and follow.

Teacher: Can anyone put that in a shorter form?

3rd *Philosopher*: A rule organises things.

Teacher: *(seeking concision)* Shall we say that a rule is an organiser? (and going to the 7th student who had provided the definition) Do you agree with this shortened *definition)*

7th *Student*: Yes.

Teacher: (eliciting alternatives) Is there any other conception of a rule?

8th *Student*: A rule is an idea that should be followed.

Teacher: (*Directing the question to the 4th Philosopher.)* What do you think about this idea, Sir? Do you understand what he means?

3rd *Philosopher*: No, I don't quite get it. I would like him to expand.

(Laughter from class).

8th *Student*: A rule is an idea that must be followed. You have to follow it.

Teacher: *(seeking clarification, to confirm comprehension)* Does this help?

4th *Philosopher*: A rule is something to be followed. I get that. But what happens to you if you don't follow it?

Teacher: *(staying on track, pressing forward)* We'll examine that a little bit later, perhaps in the counter-example box. Okay, one more conception of what a rule is.

5th Philosopher: A principle that tells how to do something.

Teacher: *(striving for accuracy, eliciting agreement)* Would you agree with that?

(writes on the board : A principle that tells us what to do).

6th *Philosopher*: Yes, I was simply looking for a synonym for a rule; a principle is a term that describes it.

5th *Philosopher*: You mean it is a long term for a short one.

6th *Philosopher*: No.

Teacher: *(applying understanding and developing)* Okay, let's see what we have got now. (*pointing to the three definitions that have been provided by the participants*). Are these three different definitions of a rule?

Class: Yes.

Teacher: *(combining and rephrasing)* Can we combine these definitions and rephrase them into one? We need to synthesise , because we are going to select one for class discussion.

8th *Student* :The first and second definition deal with organising.

Teacher (*analysing/ managing ideas*) : All right. We'll start with examining the first definition; then we will return to the second definition

9th *Student* : First of all we can rephrase the content of the second box (2nd conception of a rule as a principle) by saying a rule is a plan, a tactic, or the best plan and tactic we should follow.

Teacher: *(helping students gain insight, express themselves)* How about this insight? Do you think we must amend the second definition formulationShould we change organiser to the best plan and tactic to be followed?

10th *Student*: I guess so.

Teacher: So we'll amend the second "definition" to read: a principle is the best plan or path to be followed, all right?

WRATEC STEP 2 : R (*exploring the reasons that support the views advanced*)

Teacher: *(Requesting reasons for definitions)* Now, what are the best reasons one could give for   proposing this definition, that a rule is a principle which is the best path to be   followed. What reasons do people have for choosing rules as the   best path to be followed? We are not looking at assumptions yet,   just, the first level: the reasons.

1st *Philosopher*: It helps you reach a goal.

Teacher: *(rephrasing)* So the first reason is that it helps you to get to your goal. Without   rules that would be very difficult.

2nd *Philosopher*: Yeah! You can't get to your goal without doing something in the right way and you have to know about the right way and the wrong   way.

Teacher: Are you adding another reason?

2nd *Philosopher*: No, I agree with that. I am simply expanding.

Teacher: *(questioning for reasons)* Is there any other reason we could give in support of rules as principles?

5th *Philosopher*: I have a related reason. A principle keeps you from getting where you don't want to go.

Teacher: *(restating)* Okay, can you put this reason in more positive terms.

2nd *Philosopher*: It keeps you out of disaster.

3rd *Philosopher*: It keeps you out of trouble.

6th *Philosopher*: Positively, we can put it also in this form: If you want people to get into trouble break a rule (laughter).

4th *Philosopher*: You can also anticipate how others are going to behave.

Teacher: *(requesting illustration)* Can anyone give an example of that?

2nd *Philosopher*: Without rules our language would be without order or organisation, and so having rules helps us make sense of what other people say, and say things in a way that other people will understand. If we don't follow these rules we would neither understand nor make ourselves understood.

Teacher (applying and developing going back to the 4th Philosopher who suggested that rules help us anticipate how others are going to behave.) Do you want us to put your idea on the board , it seems relevant here?

4th Philosopher: Yes!

Teacher: *reviewing/ conceptualising)* So we saw that another reason for rules is that rules help us to understand and to interpret.

3rd *Philosopher*: To anticipate and to predict how others are going to behave.

2nd *Philosopher*: It helps you to know what other people are going to do.

4th *Philosopher*: Pardon.

2nd *Philosopher*: Helps you to know what other people are going to do.

4th *Philosopher*: That's right, and you would be better prepared regarding how others are going to behave.

Teacher (elaborating on insight concretising ideas) (writes on the board)

A rule helps you to know how others are going to behave/ it allow one to expect what others are going to do.

6h Philosopher: We can say that an application of one these reasons for following   rules based on Harry's discovery is that all people who follow   rules are people who reach their goals. But this does not mean all   people who reach goals are people who follow rules.

Teacher: I agree.

5th *Philosopher*: It might just help you reach your goal.

Teacher: *managing ideas/ organising)*Great! We can keep that as an example of an application from the book and then get a counter-example. Let's look now at the assumptions. We'll choose one of the reasons we gave and we'll explore the assumptions behind it.

having students restate and recap) Derek, can you recap where we are now in our discussion. Or inquiry. Then, we're going to choose a reason to explore further. So what have we discussed so far was that a rule was defined as... (pointing to Derek)   to the WRATEC thought map).

Derek: (1) As an organiser, (2) as a plan that helps you reach the goal to be followed and (3) as something that allows you to expect what others are going to do.

8th Student: I like the first reason, a rule keeps one out of trouble.

Teacher: *(applying democratic principles)* How many also find the first reason interesting?

Two? (two students put up their hands).

How many vote for the second reason? (Three students put up their hands.)

 How many find the third one interesting, to start with

Almost everybody put up their hands.

(*Responding with wonderment*) Wow! So we are going to look at the assumptions beneath the reason that rules allow us to expect what others are going to do.

WRATEC SETP 3 : A (uncovering assumptions)

Teacher: We are going to examine what assumptions people have for the third reason.

10th *Student*: They sort of thinking ahead of what might happen.

Teacher: *(striving for clarity)* (writes on the board)) People who think ahead of what might happen use rules. Of course, we want to find out whether this claim is true or not. So let's see what you think about this: Do rules really help you predict what you are going to do?

11th *Student*: Yes, like when you are driving in a car you expect someone will stop at a stop sign and if they don't…

10th *Student*: Yes, sometimes if they go through they're punished. But sometimes if they go through they are not punished.

Teacher: *(unpacking assumptions)* OK. , now what do you think someone is thinking about when he is driving and says: I know that rule!?

8th *Student*: He expects that everyone to follow the rule.

Teacher: *(seeking clarification/ restatement)* Can someone rephrase that?

5th *Philosopher*:   What you are saying is that people generally follow the rule but not always.

4th *Philosopher*: Most of the time.

Teacher: *(reviewing and reflecting)* You mean that other people also follow the rule?

4th *Philosopher*: Yes, that they also follow the rules.

9th *Student*: And if you follow the rules you expect other people to follow the rules.

Teacher: Okay. We can assume then that people who follow rules in this way are (looks at a student attempting to draw him out) what would you say?

8th *Student*: They are expecting others to obey the rule.

Teacher: *striving for precision)* Is that what she meant?

3rd *Philosopher*: How about people who want to avoid mistakes and disasters?

Teacher: *(explaining/applying)* We are thinking here of examples of someone

driving a car. I think she means that if you buy into the rules you are assuming others are generally buying into that.

(Writes on the board)

So other people also value your rule Right? I don't want to put words in your mouth, but…

8th Students: Yeah, yeah! (*Laughter*)

Teacher: (*probing*, *stimulating creative thinking)* Anymore assumptions?

7th *Student*: Choosing another example besides stop signs. Suppose there are train tracks and you have a stop sign in front of them, but the train has long gone from the area and no one stops. So there is no reason to do it anymore.

Teacher: (*requesting justification, relevance*) Can you tell me how the example applies to this assumption? Is this a good example for the assumption we are examining? We are looking at the assumption for allowing people to expect what others are going to do.

5th Philosopher: That others want to be understood.

Teacher: Aha! That others want to be understood. (jotting this down on the board). *(prompting the selection of best reason for inference)* Now from these three given assumptions we are going to choose one for verification. Which one seems to you to be more basic than others?

7thStudent: The third assumption makes more sense. People follow rules because they want to get their point across, so that people understand what they are trying to say or what they don't.

8th *Student*: Yes, the third one. People want to be understood.

5th *Philosopher*: I think the middle one is a more basic assumption to make. If we take a rule as something that allows us to predict ahead of time   what other people are going to do aren't we assuming that they are   going to follow these rules? That seems to me the most basic assumption to make: that other people will follow them also.

3rd *Philosopher*: Yes, when the rule is broken a kind of chaos occurs that we don't want. If somebody tells me that some cows are brown, that is something trivial that he is mentioning. But if he tells me some browns are cows, I don't know my way around it at all and it is similarly with traffic rules. That is why we keep them. But with both cases of

rules, there is a kind of structured order that we abide by, and obey by the rules in order to prevent anything bad from happening. So this is a bit about our keeping rules and expecting others to keep them.

4th *Philosopher* The assumption is that rules are mutually beneficial; that they serve everyone. So it is in the best interest of everyone that rules be followed.

2nd *Philosopher*: One of the things about a bad rule is, as in the example that was given about the old tracks crossing, that if the rule has been there for ages and ages, and no one thinks of changing it, then it's no longer in the best interest of all. It is in nobody's benefit, like some school rules sometimes.

(*Laughter*).

WRATEC STEP 4: T *(formulating the truth of the assumption in terms of an if….then inference)*

Teacher: *(testing the assumption by means of a hypothetical statement)* Let's examine this idea in a distilled form and put it to the test. Is it true that rules are in the best interest of everyone? Can we generalise? If rules are in the best interest of everyone then…what can we conclude…?

1st *Philosopher*: That, it is in the best planned path to follow that rule.

Teacher: Yes Eric. (Eric had raised his hand)

Eric: There was in the newspaper a couple days ago an article to the effect that you can't own a monkey or a reptile. And then, there was " a great father law" that said: you could own one of these animals until they make a law. That you could keep your monkey or whatever caged up.

hypothesis

WRATEC STEP 5: E *(providing relevant examples)*

Teacher: *(verifying the truth of the assumption)* Can we have examples, or a counter example? In order to have the assumption considered as true we must have supporting examples as statements supporting the assumption, then it can't be true. So can you give me examples?

6th *Philosopher*: I think we should examine if it is all rules we are talking about or some rules.

Class: Yeah!

Teacher: OK.

3rd *Philosopher*: May I offer a clarification?

Teacher: Please do.

3rd *Philosopher*: It is the principle of following rules in general that is in the best interest of everyone.   But in regard to any particular rule, it is debatable. In general, following rules is rational.

5th *Philosopher*: These are two types of questions about the same point we are making. The first question is : is it in everybody's interest to have rules rather than no rules? And the second question is: Is it in the best interest of everyone to have or follow this rule rather than that rule?

Teacher: *(sorting all the sides of the issue and explaining procedure)*   So let's then examine the larger case first. Can we say is it true that if rules are in the best interest of everyone (the assumption we decided upon for examination) then rules will be the best plan to follow? Give me now some examples in support of this assumption, then we'll see if they are any counter-examples. .So we want to say. Yes it is true , here are some examples. No, it is not always true, here are some counter-examples.

4th *Student*: How about the drinking rule. You must be eighteen-years old to drink. Say, I was seventeen and I wanted to drink but there is a law…

Teacher: Is a rule the same as a law? Is it within the same category?

4th Student: A rule is a thing that tells people how to behave. A law is something you must follow regardless. You can break a rule but you can't break a law.

Teacher: *(making distinctions for delimiting concepts)* Is there a difference between breaking a rule and breaking a law?

2nd *Student*: They can't punish you for breaking a rule. If you break a law you'll be punished.

Teacher: (asking other students) Are there any other differences between rule and law?

8th *Student*: Rules are more like the rule you are expected to follow in logic.

Teacher: Give me examples of rules that are in the best interest of everyone.

5th *Student*: The age for driving a car.

WRATEC STEP 6:   C   (eliciting counter-examples)

Teacher: Okay, can you think now of a counter- example to a rule that could be in the best interest of everyone but is not the best planned path?

4th *Philosopher*: One thing that I think comes up here is that we have to examine what we mean by the "best interest". What is happening is that one question gives rise to another question, and this latter question to another question and the way it goes.

Teacher: (*making progress by pressing forward and seeking concept clarification*)

Okay class. Let's deal with this clarification now. What exactly is meant by best interest?

9th *Student*: Whose best interest are we talking about? The people who make up the rules or the people who tend to follow them?

Teacher: We have to think about that, don't we?

3rd *Philosopher*: I am not sure what kind of counter-example you were asking us to provide. You want a case of rules in which it is in the best interest of some, but not in the best interest of all? Is this what you really want?

Teacher: (*considering objections/ testing for falsifiability*) I want something that breaks down the truth of this conditional statement and invalidates it.

6th *Philosopher*: In other words,   some kind of case which will help us qualify the statement beginning with ALL.

3rd *Philosopher*: I find it hard. I don't know if I can.

Teacher: Can we give it a try?

7th *Student*: A rule you're supposed to follow but you won't enforce it.

Teacher: (*examining relevance, empirical value, reliability of objections*) Could the monkey case refereed to, be a counter-example?

2nd *Student*: I remember a case three years ago whereby a guy was told by the police that he was going to be arrested because he has monkeys.   He was told they wanted to arrest him because he wasn't enforcing   the law and they took him to court and said they will rewrite the   law.

5th *Student*: I think there is a counter-example. It would be a law that is good for everyone but which could harm future generations.

6th *Philosopher*: We have a rule that you can buy as big a car as you can afford. Big cars are great for us now but they will be pretty hard on future generations.

4th *Philosopher*: I was thinking of Apartheid in South Africa where if you were black you couldn't vote. I wonder whether that is in the best interest of everyone. It may have been in the best interest of some but certainly not of all.

2nd *Philosopher*: This is a general principle about following rules. It's known as a rationale. But sometimes we find situations where it is in the best interest of everyone that the rule not always be followed. And here I am thinking of the principle of mercy where the principle forces you to break the rule. Take for instance, capital punishment. If you follow the rule and you determine the criminal must be punished, he/she is put to death. Yet another principle, the principle of mercy makes it permissible not to follow the rule strictly

E. Evaluation. WRATEC Step 7: S. (the summary)

Teacher: *(asking for review and summary)* We've come a long way from Harry's rule to where where're at. Can someone summarise what we have accomplished? You can work on your yellow sheets which outline a summary form based on the WRATEC model of critical inquiry.

7th *Student*: (proposing a summary) A rule has been defined as the best plan or path to be followed. We suppose a reason is to allow one to expect what others are going to do. The assumption behind this reasoning is that rules serve the best interest of everyone. An example we can give to support the assumption is driving at the age sixteen The counter-example is a situation where a person does not follow the general interest. A generalisation drawn from the assumption might be….

Teacher: *(Helping to formulate the warranted generalization)* Is your assumption ready in the form If…then…

7th *Student*: If rules are in the best interest of everyone, then rules are the best plans to be followed.

Teacher: And we did find the assumption to be true in certain situations or contexts, and we also came up with some counter-examples.

(*Clapping from philosophers*)

Teacher: Concluding remarks (*extending* and *reinvesting)*

With a group of fifteen teenagers the discussion would be a little bit tighter and we would be zooming around the group a little faster. As follow up activity we would do an exercise to reinforce this idea about rules, with which we concluded. The next class, I would have them carry on with an exercise and discuss another idea that came from the reading.

4th *Philosopher*: Excuse me. I want to make a point about the Harry discussion we had today. Some people abuse logic because they think it only goes into these trivial examples about all cows being animals and stupid or trivial things like that. But the Harry discussion is a lovely example of the way in which a logical point which he makes in trivial examples can suddenly become very important because of making relevance this idea of everybody who goes to the liquor store is an alcoholic is a stereotype that does a great deal of social harm and this shows how logic is jolly well relevant to everybody's life.

Teacher: Exactly.

1st *Philosopher*: Thank you very much. It was marvellous!

(Clapping from the whole class)³.

* The participating philosophers were:

Andy Brook (Carleton University) Chairing the session, Murray Miles (Brock University), Henry Pallard ((Laurentien University), Joe Buijs (University of Alberta), David Hitchcock (MacMaster University), Laurent Godbout (Faculty Saint-Jean), Ibrahim Najjar (University of Toronto) George Ghanotakis (Canadian Institute of Philosophy for Children),

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³ For the audio tape of "Philosophers in the Classroom" and the book guide on the WRATEC model compared with other models, the novel *Out of the Cave* (English, French, Spanish), research on teaching dialogical and critical thinking skills contact Dr. George Ghanotakis at Institute Philos. 825 Sherbrooke E. suite 202 H2L1K6 Montreal Canada   e-mail: philos @ philos.ca. (514) 890-1114 website : www. philos.ca

APPENDIX A

SCHEMATIC OUTLINE OF THE   DISCUSSION FOLLOWING THE
THOUGHT-PROCESS MAP OF THE WRATEC MODEL

Topic : Rules

W (What is…) an organiser   an idea that should   a principle that
                        (1   be followed (2)   describes how to do
something (3)

R (Reasons)   keeps one   helps me reach   allows one to understand and to
        for (2)   out of trouble (4)   a goal (5)   expect what others will do (6)

A (Assumption) people need to   other people   they are in the best
         (for 6)   think ahead of   value you for   interests of every
what will happen   having rules one (7)

If…then   If rules are in the best interest of everyone, then
claim stated   rules are the best plan to be followed (8)
(based on 7)

T (True or false?)   True
 (Testing 8)

E (Examples)   traffic stop signs
                          language rules-
                          driving age
-
C (Counter   -   impact on future generations
Examples)   -   limit to the applicability of present rules
                    Ex. purchasing large cars
                    Apartheid rules
                     Principle of mercy

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