Essays dedicated to Dick de Jongh

Wriiten by past and present Masters of Logic
Edited by Loredana Afanasiev and Maarten Marx

Editors Note

The Master of Logic program was one of the projects closest to Dick de Jongh's heart. Dick initiated the program and was the head of the program ever since. All these years, Dick de Jongh ran the program with patience, great attention, and kindness towards the Master of Logic students. The influence of his efforts can be found in the scientific work of his pupils. An image of the trace that he left in their hearts you will find in the following pages.

The short personal notes were written by masters of logic from several years. The notes are not edited. They are ordered by the years of study of the authors.

On behalf of all Master of Logic students we want to thank Dick for this part of his work.

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Thanks, Dick

What makes for a successful program of studies? Is it only the curriculum, the environment and the academic accolade that will follow? Most certainly, these are things that constitute a worthwhile period of one's life. In addition, though, and perhaps more importantly, it's things like culture, personal care and guidance. What you remember after having finished your studies, is both of these things. My recollection of the two years I spent in Amsterdam leading to the first Master of Logic degree admitted by the ILLC is that of a positive atmosphere under which student and teacher together worked for the success of a program that was both new and unique. In academic terms, there was so much to choose from that someone needed to guide me not to lose sight of what I should aim for. A personal discussion in a friendly atmosphere in Dick's office sorted that out. On a personal level, once I ran into a huge personal loss, I was motivated by Dick to look at first things first, and return once I was ready for continuing. Once admitted the degree, I was heartily congratulated by Dick at the reception. Even long after having finished, I came in touch with Dick to sort a bureaucratic issue, and was promptly aided. Friendly and wise, always interested in helping out where there was need, Dick saw too that my study period in Amsterdam was both worthwhile and interesting. No matter what you decide to take up now, I hope you will get great pleasure from it. I wish you all the best and thank you for all the help and guidance throughout the years.

Sincerely yours,

Dimitris Dimitriadis, Master of Logic 1997

Replacing Dick de Jongh - Some Logical Difficulties

Marc Pauly

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Dick de Jongh's retirement leaves the University of Amsterdam with the problem of appointing a successor. As it turns out, this problem poses some logical difficulties. Let us suppose for simplicity that a three-member committee has to decide whether a particular candidate should become Dick de Jongh's successor or not. It has been agreed upon beforehand that the candidate appointed (a) has to satisfy two criteria, excellence in research (r) and excellence in teaching (t). Now consider the following situation:

	teaching?	research?	appoint?
1	yes	no	no
2	no	yes	no
3	yes	yes	yes

Thus, e.g., the second committee member believes that the candidate is excellent in research but not in teaching, and hence that he should not be appointed. What decision should the committee make?

According to one (probably the standard) procedure, a majority vote is taken on whether the candidate should be appointed. Result: the candidate *is not* appointed. According to a second procedure, a majority vote is taken on both criteria. Since a majority believes the candidate is excellent in teaching, and a (different) majority believes he is excellent in research, the candidate *is* appointed. So which procedure should be adopted?

The logical content of this problem can be formalised as follows: Individual judgements are represented by sets of logical formulas. In our example, we have $X_1 = \{t, \neg r, \neg a, a \leftrightarrow (t \wedge r)\}$, $X_2 = \{\neg t, r, \neg a, a \leftrightarrow (t \wedge r)\}$ and $X_3 = \{t, r, a, a \leftrightarrow (t \wedge r)\}$. Note that each committee member is logically consistent. A voting procedure can be represented by an aggregation function A which maps three sets of formulas to a set of formulas, e.g., $A(X_1, X_2, X_3) = Y$. We desire an aggregation function which produces logically consistent sets of formulas. Consider majority voting A_{maj}, where $\phi \in A_{maj}(X_1, X_2, X_3)$ iff ϕ is contained in a majority of X_i. Then we have $A_{maj}(X_1, X_2, X_3) = \{t, r, \neg a, a \leftrightarrow (t \wedge r)\}$, i.e., majority voting does not produce logically consistent judgement sets.

As it turns out, not only majority voting produces these logical problems. If there are enough interrelated propositions, and if the acceptance of a formula ϕ only depends on individual judgements regarding ϕ, it can be shown that the only logically consistent voting procedure is dictatorship [1]. So how can we replace Dick de Jongh? Well, it will be even more difficult than we thought...

References

[1] M. Pauly and M. van Hees. Logical Constraints on Judgement Aggregation. *Journal of Philosophical Logic*, forthcoming.

I was a master's student at the ILLC in 1999-2000, and Dick de Jongh was my tutor. Life was not very easy for me then, in particular concerning 'logical matters', but I received a lot of support from Dick. He would see me every week for tutorials, and his way of approaching logic has made an everlasting impression on me. One did have to learn 'his' language – 'this is totally wrong' = there are some mistakes; 'this is rather good' = it could hardly get any better... – but once this was done things went very well.

When the time came to write my thesis, again I found it difficult to find a topic which would combine the demands of the Institute with my philosophical background and inclination. I came up with the crazy idea of formalizing medieval logic; believe it or not, Dick was not only supportive but in fact also quite enthusiastic about the idea! Writing the thesis was a smooth process, and Dick's sharp eyes, in spite of his not too broad familiarity with the topic, were of great help in ridding it of flaws.

Besides having been my first real teacher in logic, Dick is still tacitly but deeply influencing my career, since after the masters I kept on working on medieval logic, as I still do now and probably will for many years to come. Had he not been so open-minded, I might have never actually found my 'calling'... So, again, thanks, Dick!

Catarina Dutilh Novaes

<u>From Delphi to Amsterdam</u>

Heading my way towards Euclides building back in the summer of year 2000 for an interview with Dick de Jongh I was anxious and nervous. I was really committed to follow the MoL program, but the ILLC website was rather definite: only students with a degree in exclusively specified scientific areas were eligible to apply, but neither Economics nor Media studies were included in those areas. My degrees seemed useless for the purpose I had arrived in Amsterdam! Ingrid van Loon proposed that I should have an interview with the scientific coordinator of the program and let him decide whether I was eligible to apply or not. That's how I found my way to the office of Dick de Jongh, the first member of the scientific staff of ILLC I met in Amsterdam.

Some sixteen months later Dick de Jongh was present during the defense of my thesis. He was the last person I saw before I left Euclides building for the last time. I can remember myself thanking him from the depth of my heart for offering me –in the first and most important place- the chance to study and work in a fertile academic environment such as the ILLC. I really wanted to thank him for being so open-minded and –at least for my personal benefit- a risk-taker. Three years later I still believe that it was one of my frankest statements.

So, what does Delphi stand for in the title of this document? Well, in the door of his office professor de Jongh had a poster of the Second Panhellenic Logic Symposium, held in Delphi, Greece in the summer of 1999. I've told you before that I was rather anxious for this interview. A poster from home and those unusual greek alphabet characters that I could so easily understand were enough to relax me. I was in the right place. A few minutes later Professor de Jongh opened the door. Both literally and metaphorically…

A. P. Giannakoulopoulos
Athens, 29-6-2004

Personal Remembrances of Dick de Jongh

Although I did not experience the pleasure of attending a course taught by Dick de Jongh, I learned very much from him through easy, informal conversation. Dick de Jongh possesses that which every student admires most in his teacher, and every professional in his colleague: the effortless skill in technical communication acquired only through the deepest, most penetrating understanding of one's field of study. Dick can accomplish with simple words and beautifully illustrative language what others can only with carefully planned lectures and exercises. Dick speaks casually and effortlessly about issues of immense complexity, but in terms that render the matter transparent to even the most novice graduate student.

It was this ease of Dick's character which first put my nervous mind to rest during the early days of my work at the ILLC. The courses I intended to pursue seemed to me frightfully intimidating; how was I to become a Master of such abstruse and inhuman disciplines? However, whenever Dick spoke to my classmates and I about these subjects, they took on a life and humanity, a concreteness they did not formerly possess. Once, I and some others approached Dick regarding the complexity of a particular problem. None of us knew for certain whether this problem was tractable or not. Dick replied immediately that it was not tractable. Pointing to a rapidly branching sub-component of the problem, Dick remarked "You can see the NP happening." This talent of Dick's for selecting such apt mental images to encode results and explanations provided me with a newer, more mature appreciation of mathematical logic, and has forever altered my own understanding of the field.

Dick de Jongh is also the source of one of the grandest complements I have yet received in my young career. In the days before my thesis defense (which he attended), I met with Dick to discuss some matters pertaining to my degree. Dick remarked that my presence would be missed around the Institute, and said "You help keep the discussions interesting." I forget now what I said in response; most likely, it was a simple 'thank you'. I should have told Dick that he was largely to thank for my own interest in the discussions. I suppose that I'm telling him that now.

Seth Cable
Master's Programme in Logic
2001 – 2002

I was very fortunate to be a Master of Logic student at the ILLC during the academic year 2001-2002. During that time, I had the great pleasure of meeting many great people from all around the world, including the wonderfully quirky Netherlands. One of these great people was Professor Dick de Jongh. In the following, I would like to express some of my impressions of the silent leader of the ILLC.

When I arrived at the ILLC, I was full of wonder and amazement at all that was going on around me, both academically and otherwise. As is usual with life, with each up came several downs, and it was no small comfort to know that Professor de Jongh's door was always open. This facility was one I took advantage of several times during my tenure there. I am sure that many others will agree when I say that Professor de Jongh is one of the kindest, gentlest people around, not to mention one with a rather sharp sense of humour!

But allow me to share a personal experience I shared with Professor de Jongh. It was the day of my defence, and I went to Professor de Jongh's office asking him if he would like to attend. Given that my thesis was on Optimality Theory and sentence processing, a world inaccessible from the world of mathematical logic that was Professor de Jongh's academic home, it was rather odd of me to ask this of him. However, because he had been there for me so much during my time there, I very much hoped that he would be present at this most important of occasions. When I got to his office, I found him sitting there looking extremely sharp, with a slick suit and tie on and (seemingly) having just left Amsterdam's finest hair salon. I thought "Great, he already knows about my defence"! Unfortunately, the slick suit and tie and hair were not for me – they were for a celebration taking place that same day in honour of the grand opening of a close family member's new business. Needless to say, I was happy for the relative, but personally saddened, given that the chances of me making a fool of myself were rather large, and he was a sure-fire life-line in case of emergency!

Much to my delight, when I wandered into the room in which I was going to defend my thesis, sitting there in all his glory was Professor Dick de Jongh. He stayed until the very end of my talk, much later than he needed to. I don't know if I ever told him how much it meant to me – in case I didn't, I will take this space now to do so. Professor de Jongh, your attendance at my defence was one of the classiest gestures I have ever received. You had very important prior engagements, yet you still came to see me present my work. This show of class was not in the least an isolated incident. You demonstrated this kind of dedication to your students (and fellow colleagues) time and time again. This dedication has helped make the ILLC a wonderfully stimulating atmosphere, both academically and personally. For all your hard work, dedication, and compassion, we all thank you. I wish you the best of luck in your retirement. You have truly earned it.

Raj Singh

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Before I went to Amsterdam, I admired Amsterdam as my holy place in logic. After I left there last summer, I admire and love Amsterdam more deeply because of the logics and people that I met there especially of Dick, the co-advisor of my master thesis.

It was Dick's supervision of my master study there that made me do my best in Amsterdam. Just after I arrived at ILLC, there was a party of the master of logic students in Loredana's place. During the party, many students told each other what they wanted to study at ILLC and what they expected from it. I just said: "Intuitionism Only!" This is Amsterdam!! The city world-famous for Brouwer, Heyting and intuitionism!! But later I was a little disappointed at the curricula of the graduate program in logic: there was only one reading course in intuitionistic logic offer by Prof. Troelstra. And Dick is the only active intuitionistic mathematician at ILLC. Fortunately, all my disappointment evaporated after Dick's help with and supervision of my mater study there. One day in March, he told me that one of his former Ph. D students Rosalie from Vienna had some topics in intuitionistic modal logic which could make a master thesis. She is doing intuitionistic logic. This is just great! Later he also gave me the opportunity to study at another famous university for logic University of Utrecht. The Philosophy Department there hosts a lot of intuitionistic logicians. I learned a lot and had a good time there. All these helps from Dick quenched my thirst for logic. It was interesting that, after I finished my thesis, I found that it was more modal than intuitionistic. I was still very happy that I could combine my two favorite logics together in one thesis.

Also I am very grateful to Dick's encouragement all along my study at ILLC. Sometimes even one can change everything. I remember that at the end of last June we tried to prove that iPL is closed under the rule $\Box A \rightarrow \Box B / A \rhd B$. He gave me a hint how to do that. But I did not understand his ideas very well. Even after one whole day's blackboard work in one classroom in Euclides Building trying to implement his ideas, I could not go through the proof. Next day, I "understood" his suggestion and gave it to him. He told me that my proof was not his original idea but he liked it especially one very small lemma:

If L is an instance of Lob's axiom, then iP4$\vdash \Box L \rightarrow L$

I still remember what he said about this small thing: "I am surprised." This was really an honor from such a good logician. But he added: "I am still not satisfied (with this semantic proof). I want to see a syntactic proof." Next day I gave him a syntactic one. Encouraged by this small success, I moved on very fast in my thesis writing and finished it in the middle of that July.

In my eyes, Dick is a perfectionist and pursues logic as an art. His logic is a kind of magic to me. I am very happy that I could study with him for my master degree from Amsterdam.

Dear professor:

It is really nice to have the opportunity to tell you: "Thanks". Although I have not worked a long time with you, I appreciate all the help that I have received from you. I know that part of this help was part of your obligations, but I believe that you sometimes did more than your duties required. I knew a professor interested in his students as persons, in what was happening with them. Your capacity to understand some situations beyond the academic face it is something that I am not going to forget. Sincerely, thanks for all the help that before and during the master you gave. Specially, thanks for your time when I needed extra help for understanding some topic. I hope new generations can have the benefit of meting you. They would know a beautiful person hidden behind a professor.

Kind regards,

Teresita.

And … because you knew about how much I missed Mexico I send you the letter of a Mexican song, that express that feeling. This song is a little sad, but its beauty for me is in being the expression of our humanity, expressed sometimes or mainly, in our weaknesses.

Cancion mixteca (Jose Lopez Alaves)

Que lejos estoy del cielo donde he nacido!
inmensa nostalgia invade mi pensamiento.

Y al verme tan solo y triste
cual hoja al viento,
quisiera llorar,
quisiera morir de sentimiento.

Oh tierra del sol!
suspiro por verte
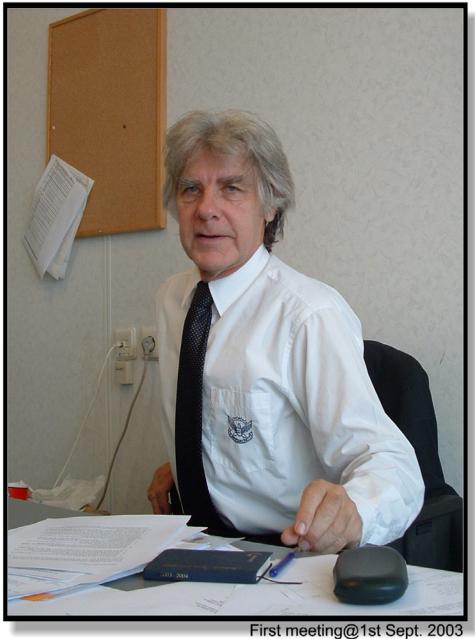ahora que lejos,
yo vivo sin luz, sin amor;

Y al verme tan solo y triste
cual hoja al viento,
quisiera llorar,
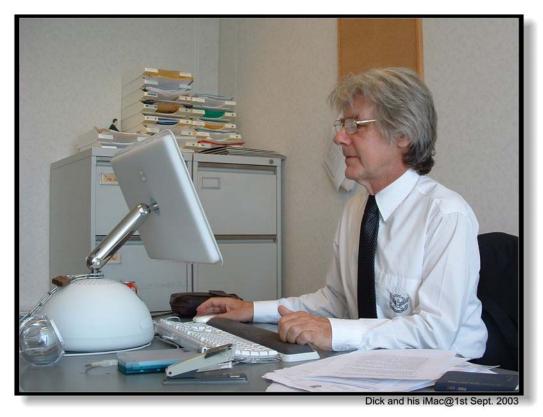quisiera morir de sentimiento.

For Dear Dick:

The first time I came to know prof. Dick de Jongh was one year ago. He kindly helped me to know more about the ILLC and new curriculum of Master of Logic program before I came here. On the first day of September, 2003, I met him in his office. We had a pleasant conversation. He spoke softly as if he did not want to disturb the air in the room.

In the following pages, I will present some photos that I took of him and use this to remember the occasions I met him and to express my greatest gratitude to him.

Here I begin with a photo of our first meeting:

First meeting@1st Sept. 2003

One notable thing in Dick's office is his translucent iMac. Here is a picture of this:
(They match very well, don't they?)

Dick and his iMac@1st Sept. 2003

Dick has always been ready to help me on whatever difficulties I would encounter. Moreover, he has always tried to make the life of his students enjoyable. On Christmas day of 2003, four students and I were invited to visit Stedelijk Museum and have dinner with him.

Dick's invitation@Xmas 2003

Dick and Christel served Thai food for dinner. We had a nice dinner and conversation. Here is a picture witnessing the happiness of him and Christel when receiving the gifts from us. He seems a bit shy. ☺

Dick and Christel@Xmas 2003

This is the latest photo I have of Dick. It was taken at the LIT's farewell party on 7th June, 2004. One may notice that although he is reaching the time for his retirement, he is still actively attending many kinds of meetings. He is still youthful.

Dick@LIT's farewell party,2004

Ji Ruan
Amsterdam. June 25, 2004.

Gift Appendix

To dedicate as a gift and memory for Dick, we created a multicultural GIFT appendix to the Liber Amicorum.

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