Teresa, Michal, Ladies and Gentlemen,

The success of this Epiphany Conference is due to an absent friend: Jan Kwiecinski. The many comments made about him in the talks given at this conference confirm something that we already knew—that Jan was a very special person.

In the book "Utopia", written nearly five hundred years ago by Thomas More<sup>1</sup>, there is a character description that perfectly describes Jan. I can do no better than to share it with you.

I do not know which impressed me more, his intellectual or his moral qualities. Certainly he was a very fine person, as well as a very fine scholar. He was scrupulously fair to everyone, but towards his friends he showed so much genuine kindness, loyalty and affection, that he was almost unique in his allround capacity for friendship. He was unusually modest, utterly sincere, and had a shrewd simplicity all his own. He was also a delightful talker, who was witty without hurting anyone's feelings.

Jan had the rare gift of being totally at ease with himself, with life and with Nature.

Jan had a love of mountains. There is a mountainous region East of Zakopane, where in 1947 the government moved the whole population out at short notice—I believe the region is called Bieshtchady. Jan, as a student, together with three companions, went for two or more weeks climbing in this completely deserted region. Clearly they had to take all their supplies. They were completely cut off. This was scary. Remember there were no mobile phones then. According to my informant, it soon became clear that Jan was the pivotal person. Someone who could overcome all obstacles and someone who would ensure that eventually they would all return home safely. Much to my surprise, I learnt that in those days Jan smoked a pipe. Interestingly,

<sup>&</sup>lt;sup>1</sup>The quotation is taken from the translation from the Latin by Paul Turner. Thomas More (1478-1535) reluctantly became Lord Chancellor under Henry VIII. However, he did not bow to Henry's wishes and was eventually beheaded for refusing to recognize the break with Rome.

my informant was especially comforted by this, or, to be more precise, by Jan continually cleaning out and relighting his pipe. Incidentally, my informant was aghast when he saw Jan absentmindedly cleaning out his pipe with an expensive pen, that I think Teresa had just given him.

Another of his loves was music. To see Jan and his son, Michal, playing duets on the piano was a sight for sore eyes. Occasionally Jan would accidentally play a wrong note and give a little chuckle. Often, on our walks, Jan would point out mountainous paths that he had taken with Michal when he was much younger. It was clear that he was quietly very proud of Michal.

As a scholar, Jan had truly outstanding gifts in inspiring and teaching young researchers. Recalling his "mountain leadership", it is clear that his gifts lay in giving students confidence in their own abilities, and in their certainty that he would be able to help them overcome all obstacles on their route to a successful Ph.D. This continued throughout his long and extremely fruitful research career. Two examples of his pioneering, highly-cited contributions with young researchers involve the organizers of this conference. First, with Michal Praszalowicz he formulated the equation for three-gluon odderon exchange. This was also accomplished independently by Jochen Bartels, and is now known as the BKP equation. This classic work did not even make it into Michal's thesis, so I am very impressed by the standards of the Jagellonian Ph.D degree! The second example is the discovery of geometrical scaling done with Krzysztof Golec-Biernat and Anna Stasto. Moreover, we heard this afternoon from Stefano Forte how, as a very young researcher, he had sent Jan a long list of questions—and how surprised Stefano was to receive back from such a senior academic a detailed answer. We heard how this completely changed Stefano's research field. If Jan could do this to an Italian that he had never met, just imagine what would happen to young Polish researchers.

I was very fortunate that Jan visited Durham for an extended period in 1990. This quickly developed into a very fruitful research programme, that involved the exchange of young researchers between Krakow and Durham, which continued for the rest of his life. Where did the funding for such exchanges come from? Remember in those days there were no Easyjet flights, and the fares

alone were about 250 pounds (and I do not know how many million zls). So, for interest, I have made a list of the sources of our funds. It started in 1990 with the award to Jan of a Sydney Holgate Fellowship from Grey College, Durham. Then, in no particular order, there were funds from "Go West" and "Go East" EU Fellowships, Royal Society grants, Polish KBN - British Council Exchange Programme, Krakow Epiphany Conferences, UK HEP Summer Institutes, UK Phenomenology Initiative Workshops, Zakopane School of Theoretical Physics, Rutherford Laboratory, UK Research Council, Krakow Institute of Nuclear Physics, Durham University and last, but not least, the TEMPUS programme. Our TEMPUS award was originally for the European Institutes forming the New Muon Collaboration (NMC), to which Krakow and Durham were subsequently added to give more theoretical presence. Actually this "added" connection originated from Barbara Badelek's habilitation examination by Jan, which, as we have heard, lasted all day and initiated their lengthy research collaboration on spin and forward physics. Barbara was a Warsaw member of NMC.

TEMPUS was a perfect programme to support the Krakow-Durham exchanges because it provided special funds for exchanging students. However, there was a major problem. TEMPUS allowed a student only one visit. No repeat visits were allowed. How could you develop a Ph.D. degree from one short visit? So Jan and I contacted TEMPUS and asked that if there existed a joint Krakow-Durham Ph.D. degree would the one-visit rule be relaxed. TEMPUS were overjoyed—they said this was what their programme was all about. So we set about persuading our Institutes about the merits of such a joint degree. It was not easy, as naturally no Institute wishes to lose the sovereignty over its degree. Nevertheless we succeeded. You should ask to see, for example, Anna Stasto's joint Ph.D. certificate. On the top, there is a picture of St. Mary's Church in Krakow and if you proceed along the skyline you encounter a picture of Durham Cathedral.

The Durham students (and I) loved visiting Krakow. A major reason was the warm hospitality, and sumptuous Polish meals, offered by Teresa and Jan. Going the other way, the hospitality offered by Grey College was much appreciated by the Polish visitors. Jan was greatly loved by *all* the staff at the College—by the porters, the cleaning staff, the catering staff, the Bursar, the Vice-Master (who provided him with another opportunity for piano duets) and by the then Master, Victor Watts. Indeed, Jan was soon made an Honorary Fellow of the College. The occasion was marked by a small banquet for which Victor wrote, and recited, the following limericks

There was an old - no, a young man from Krakow who of super-symmetrical truth, of Higgs and his boson and all that goes on in physics knew every proof.

When not in the lab this researcher took his food and his drink and his nurture at a college called Grey no distance away, this egregious Polish researcher.

Now he met up with Martin the prof who was famed as a bit of a boff--in in sparticle studies they became close buddies and the spartnership really took off.

Of my limericks this is the last: dear Jan the time goes too fast: super-partner and boon, please, do return soon and we'll put on another repast.

There existed a small booklet giving information about the College, which contained a list of the small number of Honorary Fellows. I heard someone remark to Jan that his name was listed next to the Bishop of Durham. Knowing Jan's aversion to pomposity, I wondered how he would respond to this comment. He said "Yes, my name appears just above the Fire Regulations".

Jan is irreplaceable. We always miss him and treasure our memory of him.