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## ST. JOHN PAUL II'S IDEAS OF DIALOGUE BETWEEN THE CHURCH AND SCIENCE

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**Abstract.** This paper will analyse the teaching of Pope John Paul II with regard to the opening of the Church towards science. This is a relevant issue to the Christian faith. Its justification is made today in a climate of scientific thinking, in which scientific tools of recognising of the world, as well as the scientific picture of the world play an important role. This article will demonstrate in sequence: (1) the need for dialogue between the Church and science; (2) the methodological considerations, and (3) topics of this dialogue. Particular attention is paid to the papal indications on general criteria of dialogue between theologians, as the representatives of the Church and scientists, as the representatives of various fields of scientific exploration.

**Key words:** John Paul II; the Catholic Church; science; theology; relationship between the Church and science.

During the pontificate of Pope St. John Paul II (1978-2005) an important activity concerned the planning of the Church's relationship with the modern world. Within the Church and its theology, a coherent vision was sought of the best way to establish a dialogue with the modern world. Among the various themes of that dialogue was a theme of great importance in papal teaching, namely the dialogue of the Church with developing scientific thought. This was not something new. A dialogue between the Church and science has existed ever since the beginning of the Church because the relationship between

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reason and faith is implicitly associated with, and central to, Christian thought and teaching.

The engagement of St. John Paul II in this kind of dialogue is well reflected in the words of his speech to the participants of the meeting of the International Research Centre of Ettore Majorana in Erice (Italy), where he said, from the beginning of his pontificate he had wanted to express the belief that dialogue between science and faith was not only possible, but also necessary, he also had tried to remove all obstacles that could hinder its ongoing development.<sup>1</sup> The multiplicity of the papal speeches, affecting various aspects of the Church's dialogue with science and the various levels of meetings with representatives of science is a confirmation of these words.<sup>2</sup>

The purpose of this discussion is to present the thoughts of St. John Paul II on the Church's dialogue with science. The sources for the development of the given problem are essentially statements of the Pope addressed to the members of the Pontifical Academy of Sciences, participants in interdisciplinary symposia, as well as the occasional speech to scientists. Although the Pope's speeches touch on various issues concerning the Church's dialogue with science and are frequently intertwined in his statements, they generally revolve around three specific points: (1) the necessity of the Church's dialogue with the world of science; (2) the methodological considerations, and (3) content of this dialogue. Therefore, these issues are the basis for determining the structure of the analysis of the Church's dialogue with science in the thought of St. John Paul II.

## 1. NECESSITY

The necessity of opening the Church to dialogue with science was clearly expressed in the Pastoral Constitution "On the Church in the Modern World" *Gaudium et Spes* (1965). Fundamentals of the opening should be seen, on the one hand, in recognition by the Council Fathers of the achievements of secular sciences and their impact on the development of human culture: "Today's

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<sup>1</sup> JOHN PAUL II, *Meeting with the scientists during the visit to the Ettore Majorana Centre in Erice* (May 8, 1993), no. 2 (The full text see: [http://www.vatican.va/holy\\_father/john\\_paul\\_ii/speeches/1993/may/documents/hf\\_jp-ii\\_spe\\_19930508\\_scienziati-erice\\_it.html](http://www.vatican.va/holy_father/john_paul_ii/speeches/1993/may/documents/hf_jp-ii_spe_19930508_scienziati-erice_it.html)) [access 15.07.2015].

<sup>2</sup> See P.E. HODGSON, *The Church and Science: a changing relationship*, "The Heythrop Journal" 49(2008), no. 4, pp. 642-645; D. O'LEARY, *Roman Catholicism and Modern Science. A History*, New York: Continuum 2006, pp. 191-193.

spiritual agitation and the changing conditions of life are part of a broader and deeper revolution. As a result of the latter, intellectual formation is ever increasingly based on the mathematical and natural sciences and on those dealing with man himself, while in the practical order the technology which stems from these sciences takes on mounting importance. [...] Advances in biology, psychology, and the social sciences not only bring men hope of improved self-knowledge; in conjunction with technical methods, they are helping men exert direct influence on the life of social groups.”<sup>3</sup> On the other hand, the Council Fathers to consider the achievements of these sciences as challenges to the teaching of the Church, and not only in the field of systematic theology, but also in the pastoral: “The recent studies and findings of science, history and philosophy raise new questions which effect life and which demand new theological investigations. Furthermore, theologians, within the requirements and methods proper to theology, are invited to seek continually for more suitable ways of communicating doctrine to the men of their times; for the deposit of Faith or the truths are one thing and the manner in which they are enunciated, in the same meaning and understanding, is another.”<sup>4</sup>

Already in one of his first speeches addressed to the members of the Pontifical Academy of Sciences (1979) on the occasion of the 100th birthday of Albert Einstein (1879-1955) the Pope, referring to the Constitution *Gaudium et Spes*, talks about the possibility and necessity of dialogue with the Church: “the Church considers she is helping science to keep its ideal purity in the aspect of basic research”<sup>5</sup> and she “willingly recognizes, moreover, that she has benefited from science.”<sup>6</sup> However, in the sixth part of this he states directly: “I hope that theologians, scholars and historians, animated by a spirit of sincere collaboration, will study the Galileo case more deeply and, in loyal recognition of wrongs from whatever side they come, will dispel the mistrust that still opposes, in many minds, a fruitful concord between science and faith, between the Church and the world. I give all my support to this task, which will be able to honour the truth of faith and of science and open the door to future collaboration.”<sup>7</sup>

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<sup>3</sup> Second Vatican Concil, *Gaudium et spes*, no. 5.

<sup>4</sup> *Ibidem*, no. 62.

<sup>5</sup> JOHN PAUL II, *On the Centenary of the Birth of Albert Einstein* (November 10, 1979), no. 4 (From *Discourses of the Popes from Pius XI to John Paul II to the Pontifical Academy of Sciences 1936-1986*, Vatican City: Pontifica Academia Scientiarum 1986, pp. 151-156).

<sup>6</sup> *Ibidem*, no. 5.

<sup>7</sup> *Ibidem*, no. 6.

In later speeches, citing the reasons for the need for dialogue between the Church and scientists, the Pope was often guided by concern for the integral recognition of reality, on how to reach the full truth about man. And so, in an address given in the cathedral of Cologne (1980) at a meeting with scientists and students of the German universities, John Paul II cautions against the “technical” treatment of science, which can lead to its reduction to pragmatic goals. This understanding of the knowledge of science, which focuses solely on cognitive achievement is defective, and may lead to the thinking about truth as a redundant form of scientific activity.<sup>8</sup> This fact becomes an obstacle in making dialogue. In turn, direct reflection on the nature of knowledge of the natural sciences and technology leads the Pope to draw attention to the limits of their reasoning, partiality of their knowledge and the inability to answer questions about the meaning of the universe and man. At the same time the pope warns against picking, especially natural and technical sciences from the axiological dimension: “Science that is purely functional, without values and alienated from truth, can enter the service of these ideologies; a reason that is only instrumental runs the risk of losing its freedom.”<sup>9</sup>

The acknowledgment of limitations of scientific knowledge demand to be completed by a different kind of knowledge. The cooperation between the Church and science enables a holistic view of reality, which is to protect, on the one hand against an antagonizing scientific and technical vision of the world with a vision of the world understood as created by God; and on the other, the reduction of man to the subject and object of research technicians ‘the science of man’.

Worthy of note is the awareness of the Holy Father that the very dialogue of the Church with science is not something free from tensions and conflicts. Reasons for this are that the Pope could see the finiteness of human reason, whose extent is limited and is at the same time subject to error. However, despite the possible tensions and new conflicts in the Church’s dialogue with science, we do not abandon the dialogue, and this is fundamentally because we should always have “hope for a solution of reconciliation, if we take our stand on the ability of this same reason to attain truth.”<sup>10</sup>

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<sup>8</sup> JOHN PAUL II, *Meeting with scientists and students in the Cathedral of Cologne* (November 15, 1980), no. 3, (The full text: <http://www.catholicculture.org/culture/library/view.cfm?recnum=5066>) [access 10.08.2015].

<sup>9</sup> *Ibidem*.

<sup>10</sup> *Ibidem*, no. 5. See also the introduction to the encyclical *Fides et Ratio* (1998), where Pope John Paul II says that faith and reason are like two wings on which the human spirit rises to the contemplation of truth.

Thought about the necessity of integrating different dimensions of reality appears clearly in the message to George Coyne, director of the Vatican Observatory, where the Pope says: "So much of our world seems to be in fragments, in disjointed pieces. So much of human life is passed in isolation or in hostility. The division between rich nations and poor nations continues to grow; the contrast between northern and southern regions of our planet becomes ever more marked and intolerable. The antagonism between races and religions splits countries into warring camps; historical animosities show no signs of abating. Even within the academic community, the separation between truth and values persists, and the isolation of their several cultures – scientific, humanistic and religious – makes common discourse difficult if not at times impossible."<sup>11</sup>

The current breakdown in the world today, its fragmentation, often leads to isolation of different areas of life. At a general level it comes down to isolation and even conflicts between the Church and the Academy. The Pope also can see the potential to overcome both the isolation and the conflict through dialogue. Such cooperation may lead to a better understanding of the world as a whole. In addition, the search for what unites the Church and science, can lead to the discovery of values and experiences that are common to theology and the teachings of natural science despite their differences. The Pope refers here to the example of research in both modern physics and molecular biology within which it becomes increasingly apparent, despite the specificity of these disciplines, that there is an attempt for unity, which does not mean they aim to lose their individual identity.<sup>12</sup>

The very initiative of cooperation, as the Pope repeatedly points out, can assist in harmonizing science and religion. Also, science itself may find enrichment in dialogue with theology. The Pope takes here the view that science "develops best when its concepts and conclusions are included in the broader horizon of human culture and its interest in ultimate meaning and value."<sup>13</sup>

This conviction shown by the Pope about the need for cooperation is clearly present in the speeches to academics during pilgrimages to Poland, as well as during meetings with their representatives at the Vatican, especially in the context of the emergence of theological faculties in the structures of

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<sup>11</sup> JOHN PAUL II, *Letter to Reverend George V. Coyne, S.J. director of the Vatican Observatory* (June 1, 1988) (The full text see: [http://www.vatican.va/holy\\_father/john\\_paul\\_ii/letters/1988/documents/hf\\_jp-ii\\_let\\_19880601\\_padre-coyne\\_en.html](http://www.vatican.va/holy_father/john_paul_ii/letters/1988/documents/hf_jp-ii_let_19880601_padre-coyne_en.html)) [access 20.08.2015].

<sup>12</sup> Ibidem.

<sup>13</sup> Ibidem.

secular universities. In his address to the representatives of the University of Szczecin the Pope concludes that such a dialogue is needed if the fruits of scientific research in various fields are to serve full human development. The common desire to know the truth about man, about the dignity of the human person, the value of life, as well as the great importance of scientific achievements in all fields will certainly serve the deepening of knowledge.<sup>14</sup>

As a result of cooperation between the Church and science the Holy Father surmises: “Science can purify religion from error and superstition; religion can purify science from idolatry and false absolutes. Each of them can encounter the other in the wider world in which both can flourish.”<sup>15</sup> The dynamic relationship between science and religion can also lead to the realisation of the limits of one’s own field of cognitive research and increase methodological awareness. Such discoveries protect the dialogue against unjustified extrapolations, “so that theology does not profess to be a pseudo-science and science does not become an unconscious theology.”<sup>16</sup>

A further reason for the necessity of cooperation with the teaching of the Church, John Paul II states explicitly in the encyclical *Fides et Ratio*, is to show the sapiential dimension of human research, “in which the achievements of science and technology join with philosophical and ethical values, which are characteristic expressions of the human person.”<sup>17</sup> This integration will help man pursue and attempt to get closer to the truth. The Pope’s calls for dialogue between the teaching of the Church and science are not only to demonstrate its capabilities, but they are also as a clear justification for its necessity. Such dialogue should become one of the specific forms of opening the Church to the world called for by the Second Vatican Council.

## 2. CONDITIONS

In keeping with the conditions by which the Church can dialogue with science the Papal teachings are rooted in the conciliar pronouncements. This is especially true of texts that seek to identify closer conditions for conducting this dialogue. The Constitution *Gaudium et Spes* emphasizes essentially

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<sup>14</sup> JOHN PAUL II, *Współpraca i twórczy dialog* [Cooperation and creative dialogue], *OsRomPol* 25(2004), no. 3, p. 57.

<sup>15</sup> *Ibidem*.

<sup>16</sup> JOHN PAUL II, *Letter to Reverend George V. Coyne, S.J. director of the Vatican Observatory*.

<sup>17</sup> JOHN PAUL II, *Fides et ratio*, no. 106.

one basic condition, concerning the preservation of autonomy between the temporal and the eternal order: "If by the autonomy of earthly affairs we mean that created things and societies themselves enjoy their own laws and values which must be gradually deciphered, put to use, and regulated by men, then it is entirely right to demand that autonomy. Such is not merely required by modern man, but harmonizes also with the will of the Creator. [...] Therefore if methodical investigation within every branch of learning is carried out in a genuinely scientific manner and in accord with moral norms, it never truly conflicts with faith, for earthly matters and the concerns of faith derive from the same God."<sup>18</sup>

The text of this document indicates a methodological way of purifying past relations between the Church and science, but enables a stable foundation for unrestricted construction of a future relationship between the two. The Council Fathers in creating a synthesis through a dialogue between the teachings of the Church and the findings of scientific research seem to see such dialogue as an opportunity to overcome all the dangers and difficulties of progressive specialization within particular sciences.<sup>19</sup> At the same time, they clearly caution against a reduction of the reasoning of reality by the specification of research methods of the discipline to the detriment of other forms.<sup>20</sup>

The general conditions of the dialogue of the Church with the world of science that are expressed in the Constitution are gradually given more definition in the messages of the Pope to the representatives of various scientific communities. In the aforementioned speech on the occasion of 100th anniversary of Einstein's Birth, the Pope referring to the pastoral constitution *Gaudium et Spes*, outlines the terms and conditions of dialogue and cooperation of the Church with the world of science. As a precondition of this cooperation the Pope indicates the need to overcome mistakes, which were made in the history of meetings between theologians and scientists. The Pope specifically cites the Galileo case, encouraging further study of the case in order to remove any mistrust that many still tend to see as an obstacle to the final recognition that there need not be any contradiction between science and faith.<sup>21</sup> Galileo made the assertion about the impossibility of a contradiction

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<sup>18</sup> Second Vatican Council, *Gaudium et spes*, no. 36.

<sup>19</sup> *Ibidem*, no. 56.

<sup>20</sup> *Ibidem*, no. 57.

<sup>21</sup> See JOHN PAUL II, *On the Centenary of the Birth of Albert Einstein*, no. 6. See also P.E. HADGSON, *Galileo the Scientist*, "Logos: A Journal of Catholic Thought and Culture" 6(2003), no. 3, pp. 13-40.

in the overlapping between true faith and science – the Pope takes this view as a kind of hermeneutical key to the Church’s dialogue with science. So, an important basic condition for building this dialogue is to preserve the autonomy of the sciences. As an example the Pope indicates the epistemological rules which must be kept by comparing the Biblical statements with scientific statements.

In particular, it is a rule of the interpretation of the text of Scripture, the beginnings of which can be found in a letter of Galileo to Christine of Lorraine, and the supplement in the encyclical *Divino afflante Spiritu*.<sup>22</sup> The Pope concludes his message with an extensive quotation from the work of George Lemaître (1894-1966), who was one of the first presidents of the Pontifical Academy of Sciences. It shows quite clearly an incentive to open dialogue between theologians and scientists to cooperate in the search for truth. This papal message also includes some individual conditions of this dialogue, among which the Pope emphasizes humility as a feature useful not only in scientific research, but also for the conduct of the dialogue between the theologians and scientists.<sup>23</sup>

The continuation of papal comments on the conditions for dialogue between Church and science are indicated in a speech delivered a year later in the cathedral of Cologne (1980) at a meeting of scientists, teachers and students of higher education. In his speech the Pope touched upon so-called apparent conflicts that have blemished the past relationship between the Church and modern natural science. The origin of the difficulty was mostly from interference of ecclesiastical institutions in the process of scientific progress. Thus conflict was caused by a lack of respect for the distinction between the orders of faith and reason. This is the first time that such attention was directed by the Pope to the obstacles to this dialogue. He taught that: “We do not fear, in fact we deny, that a science which is based on rational motives and proceeds with methodological seriousness, can arrive at knowledge which is in conflict with the truth of faith. This can happen only when the distinction of the orders of knowledge is neglected or denied. This view, which should be ratified by scientists, could help to overcome the historical heaviness of the relationship between Church and science and facilitate a dialogue on an equal footing, as already often happens in practice.”<sup>24</sup> In the message given in Cologne, the Pope strongly draws attention to the awareness of the methodo-

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<sup>22</sup> JOHN PAUL II, *On the Centenary of the Birth of Albert Einstein*, no. 8.

<sup>23</sup> *Ibidem*, no. 7.

<sup>24</sup> JOHN PAUL II, *Meeting with scientists and students in the Cathedral of Cologne*, no. 3.

logical differences, which helps organize and overcome past conflicts in the relationship of the Church to learning. It should be noted that the information presented by John Paul II in the previous two quotations comments on general objective conditions for further dialogue. Among them primarily is the necessity to recognize and respect the autonomy between different fields of knowledge.

More specific conditions of the dialogue between the Church and science were conveyed by the Pope in his message to G. Coyne, referring directly to specific forms of this dialogue between theology and the natural sciences. Such dialogue should be free of reductionism and the overlooking of methodological differences: "Yet the unity that we seek, as we have already stressed, is not identity. The Church does not propose that science should become religion or religion science."<sup>25</sup> Possible threats to the dialogue between theology and the natural sciences are either unilateral reductionism, or imposed isolationism, whether on the side of science, or the side of theology. When therefore referring to further conditions for dialogue, the Pope speaks clearly against (1) a neutrality which favours a fragmented picture of reality, and (2) superimposing a false identity, resulting from the reduction of one discipline into another. However the Pope desired a sense of unity, which respects the difference and the integrity of each of its elements.

Notes on the cooperation of the Church and science are also found in the encyclical *Fides et Ratio* (1998), although they do not contain fundamentally new content. The teaching in the encyclical contains issues regarding the most basic relationship between reason and faith, which is the basis for the Church's dialogue with science.<sup>26</sup> The encyclical of the Pope brings together his earlier thoughts about the recognition of the autonomy of the orders of faith and reason as a guarantee to avoid conflicts between them. Although in the encyclical there is no separate consideration of the individual scientific areas of study, nevertheless the Pope's warnings about methodological eclecticism or scientific reductionism in each area of study are also valid for the proper structuring of the dialogue of the Church with science.

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<sup>25</sup> JOHN PAUL I., *Letter to Reverend George V. Coyne, S.J. director of the Vatican Observatory*.

<sup>26</sup> See JOHN PAUL II, *Fides et Ratio* (Chapter IV: The relationship between faith and reason), no. 36-48.

## 3. CONTENT

The subjects of the dialogue between the Church and sciences were more closely specified in later papal speeches of the period between 1985 and 1998. In a speech to the participants of the international symposium on “Christian Faith and the Theory of Evolution” (1985) he clearly indicated one of the main topics of specific dialogue: the relationship between the theology of creation and the theory of evolution. The Pope recalls, referring to the encyclical *Humani Generis* of Pius XII (1950), that the discussion about evolution as a model interpretation of the origin of life on Earth does presently not provoke opposition from faith.<sup>27</sup>

The subject of the relationship between the theological doctrine of creation and the natural theory of evolution comes back once again in a message to members of the Pontifical Academy of Sciences in the session on “The Origin and Evolution of Life” (1996). Although the document does not contain new direct formal comments on the dialogue between theology and the natural sciences, and only contains references to previous papal statements, it provides an example of the Pope highlighting a specific topic of dialogue, namely the relationships of the biblical teaching of creation and the natural theory of evolution. The Pope’s message clearly indicates the need for Church revision on certain expressions relating to how the natural world is perceived, like in relation to the previous assessments of the Church on the fact of evolution: “Today, close to half-century after the appearance of that encyclical, some new findings lead us toward the recognition of evolution as more than an hypothesis. In fact it is remarkable that this theory has had progressively greater influence on the spirit of researchers, following a series of discoveries in different scholarly disciplines.”<sup>28</sup>

In a message at Cologne, the Pope points to yet another issue to be aware of the area of research on interactions between technology and natural discoveries and their ecological implications.<sup>29</sup> The common themes between science, ethics and ecology appear frequently in the papal speeches. And so, in the speech during a symposium on the occasion of the 50th anniversary of

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<sup>27</sup> JOHN PAUL II, *Address to the Symposium “Christian Faith and the Theory of Evolution”* (April 26, 1985) <http://www.inters.org/John-Paul-II-Faith-Evolution-1985> [access 12.10.2015]. See C.A. BARON, *God is deeper than Darwin: John Haught’s catholic theology and science*, “The Heythrop Journal” 54(2013), no. 4, pp. 645-657.

<sup>28</sup> JOHN PAUL II, *Message to the Pontifical Academy of Sciences: on Evolution* (October 22, 1996), no. 4 <http://www.ewtn.com/library/papaldoc/jp961022.htm> [access 2.09.2015].

<sup>29</sup> JOHN PAUL II, *Meeting with scientists and students in the Cathedral of Cologne*, no. 3.

the Pontifical Academy of Sciences (1986), the Pope stated: “The harmonious relationship between man and nature is a fundamental element of civilisation, and it is easy to grasp all the contribution that science can bring in this field of ecology, in the form of defence against violent alterations of the environment and of growth in the quality of life through the humanisation of nature.”<sup>30</sup>

As a separate subject of dialogue between the Church and science one gleans from many of the papal reflections on the nature of the dialogue itself, and its conditions the kind of subject meta-reflection on the criteria for dialogue between the Church and science, which was analysed in detail in the previous considerations. Yet another theme picked up by the Pope refers to the Church’s desire for a dialogue with science, as well as there being the perception (of those outside of the Church) of the desirability of the Church’s dialogue with science. Such is the case in the Pope’s Apostolic Constitution on Catholic Universities *Ex Corde Ecclesiae* (1990), where he indicated, that this dialogue should lead to a solution of complex philosophical and ethical issues.<sup>31</sup> The Pope draws attention to the subjects of cooperation that go beyond the area directly associated with the same theology and the sciences, for questions to be asked and a pursuit for the interdisciplinary solutions, involving more than two disciplines. This subject is present even more clearly in his speech on the occasion of the 600th anniversary of the Faculty of Theology of the Jagiellonian University. John Paul II points to the transcendent dimension of research: “The search for truth, even when it concerns a finite reality of the world or of man, is never ending, but always points towards something which is beyond the immediate object of study, to the questions which give access to Mystery.”<sup>32</sup>

In discussing the contents of dialogue between the Church and science one cannot ignore specific issues initiated by Pope John Paul II in meetings between theologians, philosophers and representatives of natural science of different confessions and ideological options of interdisciplinary conferences held in the Vatican. Topics of the conferences, which are also known as the conferences in Castel Gandolfo, show a wide range of specific issues to be

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<sup>30</sup> JOHN PAUL II, *There is no contradiction between Science and Religion. Address for the 50th Anniversary of the Pontifical Academy of Sciences* (October 28, 1986), no. 8 (<http://www.inters.org/John-Paul-II-Academy-Sciences-October-1986> [access 24.08.2015]).

<sup>31</sup> JOHN PAUL II, *Apostolic Constitution on Catholic Universities Ex corde Ecclesiae* (1990), no. 4.

<sup>32</sup> JOHN PAUL II, *Przemówienie z okazji 600-lecia Wydziału Teologicznego Uniwersytetu Jagiellońskiego* (1997), no. 4 (Full text: JAN PAWEŁ II, *Pielgrzymki do Ojczyzny. Przemówienia, homilie* [Pilgrimages to Poland. Speeches, Homilies], Kraków: Znak 1997, pp. 983-990).

taken up in the dialogue of the Church with science. And so, the first conference was held in 1988 and concerned the understanding of God and nature in physics, philosophy and theology.<sup>33</sup> Whereas the other theme of the conference was 'the action of God in the world from the perspective of the natural sciences'. This topic was analysed from five particular perspectives. The conference in 1991 in Castel Gandolfo addresses the relationship between quantum cosmology and the laws of nature.<sup>34</sup> In 1993, the conference held in Berkeley was about chaos, complexity and self-organization.<sup>35</sup> In 1996 in Castel Gandolfo 'Evolution and molecular biology' were the subject of analysis. Held in Poland in 1998 in Pasierbiec the problem of neurobiology and brain research was the subject of the conference.<sup>36</sup> Most recently in 2000 in Castel Gandolfo the subject was quantum physics and quantum field theory which was reflected upon again.<sup>37</sup>

#### 4. CONCLUSION

Since the Second Vatican Council a development can be seen in the opening of the Church to dialogue with science. In its initial phase there were clearly determined possibilities and necessities of this dialogue along with the conditions for cooperation with the world of science. This openness of the Church was made possible also due to the withdrawal of many representatives of the empirical sciences from the positivist paradigm of understanding of science. Analysis of the papal statements about the Church's dialogue with science indicates not only its possibility and need to be conducted due to the importance of the transmission of the Christian relationship between *fides* and *ratio*, but also this analysis helps to set certain general conditions to be achieved. These conditions can be deduced from the statements contained in the papal directions on the circumstances and obstacles in the dialogue. Firstly one needs to include in particular the principle of re-

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<sup>33</sup> See R.J. RUSSELL, W.R. STOEGER, G.V. COYNE (red.), *Physics, Philosophy and Theology. A Common Quest for Understanding*, Vatican: Pontifica Academia Scientiarum 1988.

<sup>34</sup> See R.J. RUSSELL, N. MURPHY, CH.J. ISHAM (red.), *Quantum Cosmology and the Laws of Nature. Scientific Perspectives on Divine Action*, Vatican: Pontifica Academia Scientiarum 1993.

<sup>35</sup> See R.J. RUSSELL, N. MURPHY, A.R. PEACOCKE (red.), *Chaos and Complexity. Scientific Perspectives on Divine Action*, Vatican: Pontifica Academia Scientiarum 1995.

<sup>36</sup> See R.J. RUSSELL, N. MURPHY, TH.C. MEYERING, M.A. ARBIB (red.), *Neuroscience and the Person. Scientific Perspectives on Divine Action*, Vatican: Pontifica Academia Scientiarum 1999.

<sup>37</sup> See R.J. RUSSELL, W.R. STOEGER, F.J. AYALA (red.), *Evolutionary and Molecular Biology. Scientific Perspectives on Divine Action*, Vatican: Pontifica Academia Scientiarum 1998.

cognition and respect for the autonomy of science, which is found in all these messages of John Paul II to members of the Pontifical Academy of Sciences. The Pope clearly aims to build the dialogue between the Church, theology and science by preserving the distinctiveness of detailed methodological and epistemological standards specific to a given discipline of science. However, among the many obstacles to conducting a fair dialogue, reductionism is most often cited in the documents. The Pope's speeches also explicitly foresaw other obstacles, such as the closed minds of theologians towards a scientific point of view but especially towards those working within the natural and technical sciences, and the closed minds of scientists with an axiological point of view as well as all kinds of extrapolations and methodological eclecticism. It should be noted that John Paul II's teaching on the dialogue of the Church with science places the common quest for truth in pride of place and sees the opportunity to merge the theoretical considerations of individual disciplines (including those of science and theology) in a pursuit of a unity of science, which is able to embrace the whole of reality.

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## DIALOG KOŚCIOŁA Z NAUKĄ W UJĘCIU ŚW. JANA PAWŁA II

### Streszczenie

Wśród różnych obszarów tematycznych dialogu ze światem ważne miejsce w papieskim nauczaniu zajmuje dialog Kościoła z nauką. Dialog ten zasadniczo jest prowadzony, choć z różną intensywnością, od początku istnienia Kościoła, gdyż jest związany *implicitie* z istotną dla myśli chrześcijańskiej relacją między rozumem a wiarą. Za pontyfikatu św. Jana Pawła II (1978-2005) problematyka dialogu Kościoła z nauką stała się ważnym elementem papieskiej troski i nauczania. O dużym zaangażowaniu papieża w dialog Kościoła z nauką świadczy wielość jego wypowiedzi, dotyczących różnych aspektów tegoż dialogu, wygłaszanych podczas różnej rangi spotkań z przedstawicielami nauki. Artykuł ma na celu syntetyczną prezentację wkładu św. Jana Pawła II w dialog Kościoła z nauką. Źródłem dla opracowania postawionego problemu są zasadniczo wypowiedzi papieża kierowane do członków Papieskiej Akademii Nauk, uczestników interdyscyplinarnych sympozjów, jak i okazjonalne przemówienia do ludzi nauki. Choć papieskie wypowiedzi dotyczą różnych kwestii dotyczących dialogu Kościoła z nauką i najczęściej przeplatają się w jego wypowiedziach, to jednak zasadniczo koncentrują się wokół trzech: (1) uzasadnienie konieczności podejmowania dialogu Kościoła ze światem nauki; (2) jego metodologicznych uwarunkowań oraz (3) tematyki. Wymienione kwestie stanowią podstawę do wyznaczenia struktury dla prowadzonych rozważań, ukazując równocześnie konkretny wkład św. Jana Pawła II w rozwój dialogu Kościoła z nauką.

**Słowa kluczowe:** Jan Paweł II; Kościół katolicki; nauka; teologia; relacja Kościół i nauka.