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## **The dilemmas associated with defining the area and scope of research in the light of the author's own studies on the issues of hygiene in the Second Polish Republic**

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### **ABSTRACT**

The dilemmas associated with defining the area and scope of research are intrinsic components of any scientific studies. The present work should be recognized as a theoretical study where the author's own methodological dilemmas concerning studies on hygiene in the Second Polish Republic are presented. The decision to analyse them in this article was prompted by the fact several interesting dilemmas concerned the examined issue have been found in the course of my study. All the discussed dilemma should be associated with the multifactorial nature of hygiene. This aspect has created serious difficulties in defining boundaries between both individual aspects of hygiene as well as between hygiene and other medical disciplines. This resulted with problems in dividing the thesis into individual sections in such a way it could reflect all multifactorial aspects of hygiene. Additionally, the difficulties associated with determining the scope of hygiene perceived as a medical discipline arose. It was fundamental issue because there was a need to determine the clear boundary between the area covered by hygiene and other medical issues which should not fall within the scope of my research on hygiene.

**Keywords:** hygiene: dilemma: scope and area of research: methodological: multifactorial: interwar Poland

## **1. INTRODUCTION**

It might at first seem that hygiene cannot be an interested subject of research. Probably this could be the reason for which there are not many researcher who want to face this problem. It seems to be a good explanation, however, it does not mean that any other reason cannot be indicated. It is up for debate whether (by any chance) the multifactorial nature of hygiene cannot be identified as a factor which discourages scientists from dealing with this subject? It is difficult to decide, however, the fact is that people prefer to concern themselves with attractive and less complex problems, generally. Regardless of these reasons, it is true that the mentioned multifactorial nature of hygiene creates numerous dilemmas to researchers. First and foremost, it is also difficult to determine the scope of hygiene (perceived as a medical discipline) within medicine. Secondly, the individual aspects (practices) of hygiene interpenetrate with one another what makes the problem even more complex. As a result, to determine the area and scope of my research as precisely as possible, appeared to be a crucial thing. Accordingly, the main purpose of this paper is to present and examine all the key dilemmas associated with defining the area and scope of my research as illustrated on my own experience gained in the course of my research on hygiene in interwar Poland. In order to achieve the goal the paper is divided into two parts. The first one discusses the most important theoretical issues related to the examined subject. As a result, it deals with various aspects of dilemma in scientific research, scholars may encounter during their research activity. It should be emphasized that it concentrates on the methodological dilemmas which are recognized as the most important in the light of the topic of the present paper. The practical part should be treated as a sort of a case study when my own thoughts on the examined subject will be presented. It is worth noting, however, that this parts is also divided into two sections. The first section discusses the issues referred to the problem of defining the basic terms which need to be explained in details in order to define the scope and area of research in a proper way. Consequently, the focus is put on explanation of the term *hygiene* in the first section. The final part of the practical part is devoted exclusively to discuss the key dilemmas I have encountered during studying hygiene in interwar Poland. The paper ends with a conclusion section where all findings are summarized and the final conclusion are drawn.

## **2. DILEMMAS IN MODERN SCIENCE**

Generally, it can be said that scientists are expected to face a wide range of embarrassing dilemmas in modern science. Undoubtedly, this is a right comment having regard to the fact that science should be treated now as a rapidly growing and more and more interdisciplinary field. Certainly, such a rapid development must lead to a substantial increase in the number of dilemmas which are almost a “by-product” of this development. According to Adriaan in’t Groen et all (8):

Dilemmas, fundamental controversies, basic oppositions between methods and approaches, occur in all fields of science and scholarship. Often dilemmas arise at the interface where science and society meet, or whenever several sciences or disciplines clash. The paradox of dilemmas is that although one might prefer to do without them, they are nevertheless indispensable.

As the above quoted words show dilemmas occur in any field of science. What is more, they should be recognized as an integral part of any scientific activity. It is hard to deny such an opinion when we consider that science has not right to exist without dilemmas. However, it seems to be interesting to find what factors provoke such dilemmas and whether a tendency towards decreasing or increasing in the number of them can be seen these days.

As far as the modern science is concerned, two key factors should be indicated in the context of their great impact on producing the ever-increasing number of scientific dilemmas. The constant progress in science appears to be the first one. It is obvious that science cannot stand still and is expected to be in a constant state of flux to find new solutions, inventions and create new theories, approaches etc. This fact must be reflected clearly in the number of dilemmas associated with the scientific progress. As Adriaan in't Groen et al (8) rightly point out:

Without dilemmas progress in science and scholarship would be unthinkable. New paradigms come into existence and compete with the old for acceptance. Thus, by inciting researchers to make new efforts and pose new questions, dilemmas reveal new insight and sustain the ferment knowledge.

Paradoxically, it looks like the scientific progress may contribute to reduce dilemmas, at first sight. Such assumption can be justified by the fact, that new equipment and theories should make the process of research much easier than it used to be in the past. All this is true, but the problem is that today's scholars are expected to carefully examine an increasingly large number of new problems and to study even the smallest pieces of our reality. Consequently, the common believe assumed that the number of scientific dilemmas is likely to decrease with time is not borne out by any evidence. On the contrary, there are many implicit evidence indicating that the progress in science contribute to produce of the increasing number of dilemmas, proportionally to the progress in scientific research. And it can be assumed that this process seems to have no end in fact.

Another key factor responsible for multiplication of dilemmas appears to be interdisciplinarity. As Weingart and Padberg (119) note:

Interdisciplinary research of various kinds is today one of the crucial foundations for academic research progress and needs to be integrated into higher education establishments at an institutional level..., many universities and academic research policymakers postulate that interdisciplinarity is a highly promising precondition for academic research progress if not even the key factor.

Without a doubt, the postulate of interdisciplinary approach is considered a great challenge for scientists representing different fields of science. This challenge is, however, at the same time a great chance for finding completely new ideas and discoveries. A great number of them could never have been discovered if the traditional approach (assuming the classical division into separate fields of science) were still used. From this perspective, the increasing number of scientific dilemmas in the contemporary science do not come as a surprise. It can be said, on the basis of the information presented, that modern science is founded on dilemmas of different kinds. Scientists are expected to find the most appropriate solutions to them, what makes the whole process of research really fascinating. Certainly, this

opinion is not held by all. There are still many people who believe that it is a little dull activity. They are convinced that it is reserved to people often referred to as bookworms or a kind of a “freak” who are not able to lead a normal life. Yet, such widespread opinions seem to be completely wrong. These days, scientific research provides us with an opportunity to use the most advanced technology, to work with true intelligent people and make a good use of mixed methods, techniques and approaches what makes them not only interesting, stimulating but also entertaining. Scientific dilemmas in this context, should not be considered an obstacle to any studies. It is much better to treat them rather as a sort of “fuel” which propel the whole mechanism and pass it forward, instead. Undoubtedly, people who are involved in such an activity can never feel bored or unsatisfied. It seems obvious due to the fact the possibility of solving the successive dilemmas brings scholars closer and closer to solve the final problem. Therefore, scholars are expected to be not afraid of dilemmas but try to identify them and solve as soon as possible. They must address courageously a wide ride of factors and, above all, to take into account the risk factor. Obviously, the scientific progress must be associated with risk that needs to be diagnosed sufficiently in advance. As Jablonowski (20) rightly points out, the thing is just to ... “[determine] suitable, risk-free pathways of progress, not determining how we get ourselves out of precautionary jams once we are already there”. Such dilemmas should be treated by scholars as a challenge rather than an obstacle because they enable them to find a problem and then to solve it successfully.

### **3. METHODOLOGICAL DILEMMAS ILLUSTRATED BY THE EXAMPLE OF MY OWN RESEARCH ON HYGIENE IN INTERWAR POLAND**

As mentioned earlier, scientists who are involved into scientific work are provided with different types of dilemmas in their work. Generally, these dilemmas may be divided into two main categories – ethical and methodological. The first category refers to professional ethics and social responsibility guided by both moral and legal norms (Wueste, 1). As the topic of this paper suggests, we are not going to explore problems related to ethical dilemmas. Undoubtedly, it should be considering a very interesting area of investigation but it does not fall within the field and scope of the present article. This paper deals with the second category namely the methodological dilemmas encountered by scholars in the scientific process.

Researchers are faced a wide range of methodological dilemmas if they want to make their research as effective as possible. First and foremost, they are obliged to formulate the purpose and the subject of the research. Secondly, there is a need to formulate the research problems and hypothesis verified during the research process (Sztumski, 7-10). The next step is to choose the most appropriate methods, techniques and tools. Finally, the scope and area of the research must be determined (Pilch, 42-66, 178). Due to the restricted volume of the present paper all of them cannot be discussed here. As the topic suggests the attention need to be paid to the last two elements. According to Pilch (178) the area of research should be defined as not only as a space but also a typology of features and phenomena to be explored in the course of the study.

This observation seems to be particularly important in the context of discussing the practical aspects associated with establishing the scope and area of research. It should be emphasized that the decision to illustrate this problem through research on hygiene in interwar Poland was intentional.

During my research I have encountered several fundamental dilemmas while defining the scope and area of my research and it explains the idea why I decided to share some of my thoughts with readers.

This word *hygiene* is of Greek origin and was adopted from the name of the Greek goddess of health, *Hygeia* (Faria, 1). Consequently, its roots reaches back to ancient Greece and from the very beginning it was be related with health and medicine (Virginia, 10). The first dilemma I have come across when conducting my own research was the problem of adapting the most appropriate definitions of *hygiene* now. It seemed to be crucial in the context of establishing the scope and area of my study. In order to achieve the goal some definitions taken from various sources need to be presented below. Hygiene is the key word so it required detailed explanation. The first definition was taken from Macmillan Dictionary where the common understanding of this word is presented. According to this dictionary (705) *hygiene* means:

...the practice of keeping yourself and the things around you clean, in order to prevent illness and disease.

Churchill Livingstone Medical Dictionary (230) gives such an explanation of this term:

Hygiene *n* the science dealing with the maintenance of health-hygienic *adj.* *communal hygiene* embraces all measures taken to supply the community with pure food and water, good sanitation, housing, etc. *industrial hygiene* (*syn* occupational health) included all measures take to preserve the individual's health whilst he or she is at work. *mental hygiene* deals with the establishment of healthy mental attitudes and emotional reactions. *personal hygiene* includes all those measures taken by the individual to preserve his or her own health.

The last definition is by the World Health Organization (WHO). This international body adopted the following definition of hygiene (Hygiene, WHO website):

Hygiene refers to conditions and practices that help to maintain health and prevent the spread of diseases. Medical hygiene therefore includes a specific set of practices associated with this preservation of health, for example environmental cleaning, sterilization of equipment, hand hygiene, water and sanitation and safe disposal of medical waste.

The above presented definitions have been quoted to show that *hygiene* should be considered a truly multiple meaning word. The first definition echoes the common beliefs about this term and it shows how this term is referenced in popular culture. In common parlance it simply means *cleanliness* or *purity* (Macmillan Dictionary, 705). From such a perspective, hygiene seems to be a general term which refers to activities and conditions which are used to maintain personal cleanliness, sanitation and health. Such a perception of its meaning have dominated our way of thinking since a prehistoric times and is still present today (Curtis, 12).

Although, these motifs are common for all quoted entries, three consecutive definitions present much broader context of its use. First and foremost, our attention is drawn to the fact that hygiene may be linked with many adjectives, such as: communal, industrial, mental,

personal, dental, oral or hand hygiene. All of them are now considered among the most effective ways of preventing the spread of infections and pathogens (Huang, Stewardson et al, 379). On the one hand, all these hygienic practices intend to ensure the protection against various types of threats, but on the other hand they cover different areas of life. This is the first serious dilemma which scientists encounter while examining this subject. The common understanding of the word *hygiene* suggests that it deals only with the problem of keeping clean of our body and things around us. But as quoted definitions show, the word hygiene is often associated with completely different areas of our life. Curtis (11) asserts that:

Hygiene is a complex Pandora's box of a topic, full of doubtful stuff we'd rather not confront. It contains filth and disease, bugs, germs and grubby private habits. It contains ideas about obsessive cleanliness, dirty old men, and coercive states enforcing mental and racial hygiene. On the other hand, it also contains images of sparkling kitchens and bathrooms; scrubbed, perfumed and well-groomed people; and an endless array of cleaning products. Hygiene sits uneasily between filth and cleanliness; between the private and the public; and between the scientific and the moral or religious domains of society.

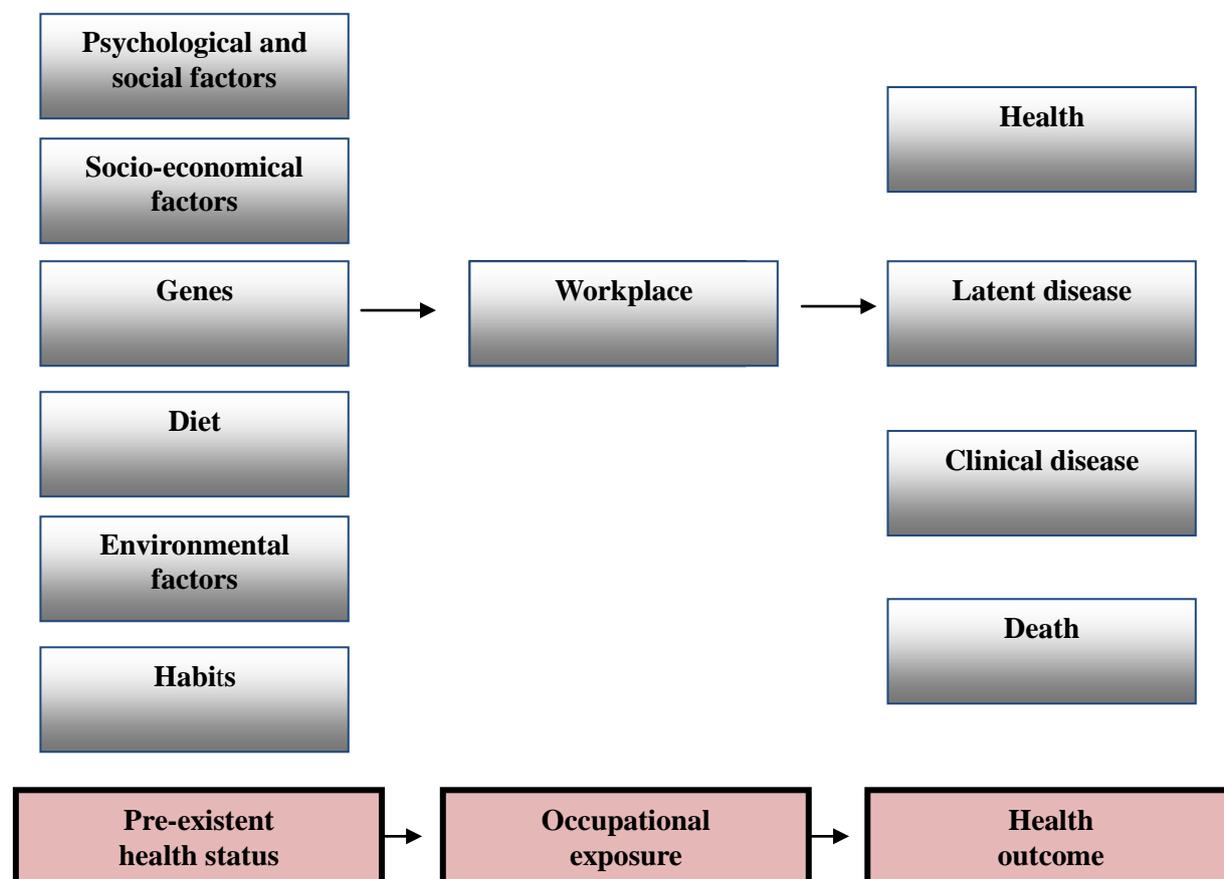
It means that the word hygiene can be used in different context and to describe a variety of things and activities. For instance, it can take both the emic and etic perspective. The first perspective is attributed to members of a given community whereas the second one emphasizes the scientific point of view on this subject (Duranti, 172). The word hygiene has also a figurative meaning which can be used to indicate both physical and mental actions. To illustrate this problem the occupational hygiene may be used. The term *occupational hygiene* does not simply mean to keep the working environment clean and tidy but it also involves prevention, evaluation, anticipation and recognition of hazards in our workplace. As a consequence, occupational hygiene has the multifactorial nature in fact. It means that it deals with a wide range of factors and risks involving both the pre-existent health status, occupational exposure, and health outcome. The Figure 1 present these interdependence in a graphic form.

As the Figure 1 shows, occupational hygiene refers to a wide range of pre-existent aspects such as: as psycho-social and socio-economic factors, diet, genes, environment or habits. All these factors are exposed to the workplace environment which affects our health and may cause various damages to it (latent diseases, clinical disease or even death) (Gardiner & Harrington, 4). The example of occupational hygiene has been chosen intentionally because it reflects the differentiation of dilemmas associated with establishing the scope and area of research on hygiene in a clear and accurate way.

This example demonstrates that, irrespectively of the historical epoch, the same factors need to be taken into consideration while examining the issue of hygiene. Certainly, the historical, political, and social circumstances can differ to a certain extent but above mentioned variables i.e. psycho-social and socio-economic factors, diet, genes, environment or habits would be almost the same. It is particularly important observation due to the fact the same mechanisms operate in the case of occupational hygiene, personal hygiene, communal hygiene etc.

Consequently, they seem to be universal for any type of hygienic practise both now and in the past. As far as the problem of the scope and area of study on hygiene is concerned, it is

the researcher who is obliged to determine whether he/she is interested in examining just a single type of hygiene or to study all its aspects.



**Figure 1.** The multifactorial nature of hygiene demonstrated with the example of occupational hygiene

Source: Based on: Gardiner, Kerry and Harrington, J. Malcolm. *Occupational Hygiene* (3<sup>rd</sup> edition). Malden/Oxford/Carlton: Blackwell Publishing 2005, p. 4.

It should be emphasized that I have decided to examine all forms of hygiene occurring in the Second Polish Republic. Considering the above described multifactorial nature of this phenomenon the another dilemma has emerged immediately. I had to provoke a decision how to divide my thesis into individual sections to reflect these all aspects in the most accurate way. There were two different possibilities of solving this problem.

The first one consisted in organizing the work into several sections depending on the institutions (public and private) being responsible for administrating, organizing and promoting hygiene in different spheres of social life. In view of the fact that it was mainly the Polish state which dealt with hygiene during the interwar period (Weindling, 110-112), the first idea was to divide the thesis depending on state institutions engaged in this process. As a result, the state institutions such as schools, the army, the police, public enterprises, offices as well as specialized state and private institutes were supposed to be in the centre of the

assumed arrangement. Nonetheless, the idea of adopting such a vision was finally rejected. This was mainly due to the fact it could cause problems of interpenetration and duplication of certain content. In line with the previously defined scope and area of my study a much better solution was to divide the content into several thematic sections. As a result, I decided to remain only one section where the role of state institutions such as schools, the army or national enterprises is discussed. Certainly, it should be recognized as a very important part of the thesis, however, it allowed to discuss five other areas of hygiene. The first one made it possible to deal with a problem of defining hygiene and determining the scope of this term. Then the historical context of discussed phenomena was presented. The successive section covered different types of hygienic practices involving: personal hygiene, household hygiene, mental hygiene, food hygiene and animal hygiene. There were also individual chapters which provided information concerning: the role of hygiene in prevention and eradication of communicable diseases in interwar Poland, the activities of private and social institutions, and controversial issue associated with racial hygiene and eugenics. Such an arrangement enabled the author to avoid any interpenetration and duplication of information and positively affected the rhythm of the whole work.

Another important aspect related to the multifactoral nature of hygiene was the problem of determining the scope of this phenomenon perceived as a medical discipline (Bourdagh, 51). In other words, there was an urgent need to determine the clear boundaries between the area covered by hygiene and other medical disciplines which should be separated from hygiene and did not fall within the scope of my research. Definitions of hygiene quoted earlier have focused on describing its main goals, practices and types. None of them defined this term as a medical discipline which affects the life of millions of people throughout the world. This kind of explanation is provided by Bourdagh (51) who characterizes hygiene in the context of national populations and medical science:

... the new disciplines of hygiene and physical education constructed the national population into an object of medical treatment and developed norms for every aspect of daily life. These norms led to the incorporation of national policy directly into individual human bodies. Furthermore, as hygiene shifted the focus of medicine from *curing* disease in *individual* patients to *preventing* disease in *society* as a whole, it expended the role of medicine beyond the treatment of disease to include the monitoring and regulation of healthy persons as well.

As the quoted passage indicates, with the arrival of hygiene (as a medical discipline) the scope of the term “medicine” has been significantly expanded. As Bourdagh (51) rightly points out since that time medicine started to be interested not only in curing but also in preventing diseases. This was a real breakthrough in human thinking about medicine and its main goals. It can be even said, that hygiene provided medicine with new tools and opportunities to save lives through prevention of threats and not only by simple treatment of diseases (Paulsen, 7).

This observation seems to be particularly important when the problem of defining the scope and area of the study on hygiene in interwar Poland is discussed. The preventive role of hygiene determines the clear boundaries between this medical discipline and other branches of medicine. All quoted definitions presented earlier have underlined the preventive nature of hygiene indeed. As a result, prevention should be recognized as their common denominator

(Paulsen, 7). Interestingly, the problem was also widely recognized in the interwar period. Such Polish interwar hygienists as M. Kacprzak or G. Szulc insisted on separating hygiene from other medical disciplines due to its preventing (and not curing) nature. For instance, as an expert in the field of military hygiene, M Szulc, called for making a clear distinction between hygiene and health service. He postulated to extract the hygiene service as an independent branch of medicine so that it could have had its own organization, medical staff and procedures (Szulc, 688). The same opinion was held by another expert in the field of hygiene – M. Kacprzak (9), who called for differentiating between clinical and preventive medicine, where hygiene plays the key role.

My own experiences concerning the examined subject indicate that it is not an easy task to define clear boundaries between hygiene and other medical disciplines indeed. Generally, it can be said that the prime difficulty here, was earlier mentioned interpenetration and duplication of certain contents which are common for hygiene and other disciplines. One of the concrete manifestations of this problem is the interaction between epidemiology and hygiene. Both medical disciplines have a lot in common because they deal with communicable diseases. Nonetheless, hygiene is used to prevent and eradicate of such diseases whereas epidemiology is interested mainly in analysing their epidemiological threat, effects on health etc. (Taylor et al. 3-19). As it can be seen, both hygiene and epidemiology are associated with the same area of interests, however, their goals differ to a large extent. The same problem concerns other medical disciplines involved into process of currying people suffering from infectious diseases. In the light of the information provided, it seems to be obvious that the border line between such disciplines and hygiene should be put there where prevention the prevention stops and treatment starts. As a result, the research on hygiene should not involve any studies on certain types of treatment, therapeutic outcomes etc. because it does not fall within the scope on hygiene (irrespective of which historical period is described). To define the clear boundary is necessary in such cases because it is the only way to avoid any confusions and misunderstanding concerning the scope and area of our research.

#### **4. CONCLUSIONS**

To sum up, it is obvious that scientists who are involved into research of any kind, have to face different dilemmas they encounter in the course of their study. However, as the present article has revealed the methodological dilemmas should be treated as a challenge rather than an obstacle. Such challenges should be recognized as an integral part of any research process and scientists are obliged to solve them in order to make a significant progress in their research. My own experience concerning the dilemmas in defining the area and scope of research indicates that it is possible to distinguish the key methodological dilemmas which affect the procedure to the large extent.

All of them refer to the multifactorial nature of hygiene. It is this factor which implies a wide range of serious difficulties in assigning the clear border line within individual hygiene practices as well as between hygiene and other medical disciplines. Additionally, it was also at the root of some inconveniences in the process of dividing the thesis into separate sections. As the findings suggest, researchers are able to eliminate these obstacles by defining, in the most precise way, the scope and area of their study. While defining it they should bear in mind the most guiding principle assuming that hygiene should always focus on prevention and

protection. Such a rule enables researchers to put a clear boundaries and determine the scope and area of study in such a way they include all the desirable aspects and exclude items that are unwelcomed.

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