

NEUROTECHNOLOGY GOES TO POLISH SCHOOL. AN ETHNOGRAPHIC STORY ABOUT SCANNING ADHD¹

ANNA WITESKA-MŁYNA

INSTITUTE OF ETHNOLOGY AND CULTURAL ANTHROPOLOGY
THE UNIVERSITY OF WARSAW

In a public primary school in a middle sized Polish town, research was conducted in which a number of children were diagnosed with a new tool for identifying ADHD. This situation serves as the point of departure for an ethnographic reflection devoted to contemporary practices of diagnosing children's mental health. The screening programs, which are more frequently permeating Polish schools, generate a category of "patients-in-waiting", who can be defined as children, who remain in an intermediate position between illness and normalcy. It is they who are the potential recipients of further diagnostic acts and therapies and they co-constitute a dynamically developing area of neuroeconomy.

* * *

W jednej z publicznych szkół podstawowych w średniej wielkości polskim mieście przeprowadzono badania dzieci przy użyciu nowego narzędzia służącego do diagnostyki ADHD. Sytuacja ta stała się punktem wyjścia dla refleksji etnograficznej na temat współczesnych praktyk diagnozowania zdrowia psychicznego dzieci. Programy wczesnego wykrywania zaburzeń, które coraz częściej wkraczają do przestrzeni szkolnych, generują kategorię „pacjentów-w-oczekiwaniu” – osób, które przez dłuższy czas znajdują się w pozycji liminalnej pomiędzy chorobą a normalnością. Są to potencjalni odbiorcy dalszych działań diagnostycznych i terapii, współkonstruujący dynamicznie rozwijający się obszar „neuroekonomii”.

Keywords: ADHD, neurotechnology, diagnosis, medicalisation, Poland, patients-in-waiting, neuroeconomy

“Scientific objects may not be invented, but they grow more richly real as they become entangled in webs of cultural significance, material practices, and theoretical derivations” (Daston 2000, 13)

¹ This research was financed by the Polish National Science Centre (Narodowe Centrum Nauki – NCN) under the FUGA scheme (grant number: 2015/16/S/HS3/00150).

This paper² is about ADHD³, and a diagnostic tool, namely an ADHD scanner that was used in a local school in Poland to preliminary diagnose children. The ADS-can system was initiated in Germany as a result of cooperation between a commercial company and academic institutions with the common aim of creating a tool for an objective diagnosis of ADHD. The diagnostic process requires space of a particular dimension, a chair, a measuring apparatus, analysis software, as well as a person to diagnose and one to be diagnosed. The diagnosis comprises two steps. The first part includes a Continuous Performance Test (CPT) used to assess attention processes, impulsivity and reaction time. A child, following instructions, is required to press a button on a sphere which he or she holds in his/her hand when specified symbols appear on a small device placed in front of him or her. The second part of the test employs Doppler radar technology which measures the frequency and intensity of a child's bodily movements. The child is expected to obey the instruction to sit still until the diagnostician announces the end of the test. The collected data is then analysed by software called an ADScanalyzer which produces both graphic and numerical representations of the data. This is then compared with a short questionnaire filled out either by a parent or by a teacher based on the Diagnostic Statistical Manual⁴ – psychiatric technology widely used in the medical diagnosis of ADHD. A diagnostic summary is eventually written by the person who conducted the test.

What will follow here is an ethnographic description of the materiality and the practices that stabilize ADHD through the application of this particular diagnostic tool in one Polish school. This study hints at the gradual appearance of standard regimes that enable the circulation of biomedical and neuroscientific knowledge and capital in the Polish schooling system (see Lakoff 2005), turning increasingly exposed to medical knowledge and practice, Polish families into potent consumers of diagnostic and therapeutic practices and situating school personnel as active agents in diagnostic processes. Relating the ethnographic story of introducing the scanner into a local school in Poland, I take a closer look at the ways ADHD is being embedded in a local context,

- 2 **Acknowledgements:** I would like to thank the editors of this issue, in particular Danuta Penkala-Gawęcka for her guidance and kindness. I would also like to thank the anonymous reviewer of my article for his/her insights and suggested changes.
- 3 ADHD stands for Attention Deficit Hyperactivity Disorder. It is a psychiatric diagnostic category which describes a neurodevelopmental disorder diagnosable in childhood involving symptoms of hyperactivity, inattention and impulsivity. ADHD is included in such diagnostic manuals as the International Classification of Diseases (ICD) and the Diagnostic Statistical Manual (DSM) issued by the American Psychiatric Association. A standard therapy involves cognitive-behavioural programmes and pharmacotherapy.
- 4 The information is taken from the Biomed website, a Polish company which uses this technology for conducting preliminary ADHD diagnoses in children (<https://www.biomed.org.pl/adscan.html#breadcrumb>; access 5.03.2019).

material and practical networks and support systems, among others, through the usage of specific equipment and procedures (Latour 2000). As noted by Lorraine Daston:

“The persistence of scientific objects depends on the institutionalization of practices and an impressive array of apparatus” (Daston 2000, 12).

The tool I wish to talk about is just one example of a newly institutionalized practice intersecting commercial and academic interests, as well as the bureaucratic machine that embeds ADHD in the Polish educational system.

Interpretation of my ethnographic material will take place in relation to recent discussions concerning: the medicalization of child development, the encroachment of diagnostic cultures into schools, the influence of neuroscientific discoveries on contemporary society and models of normal child development advances in self-diagnosis, the infiltration of neurodevelopmental expertise by various actors representing divergent economic and non-economic interests, as well as the commodification of diagnostic and therapeutic technologies and services. Finally, light will be shed on the uncertainty and disorientation generated by the usage of the scanner in primary schools in the town where I conducted my fieldwork.

ETHNOGRAPHIC FRAGMENT 1

In the winter of 2016, the local Department of Education in Malden⁵ organised a conference entitled “Diagnosing and preventing psychiatric problems among school children”. A number of experts were invited to give lectures to an audience composed of school personnel, mainly psychologists and pedagogues. One of the contributors was Professor John Markovitch⁶ from a local university who talked about ADHD and a new diagnostic tool that would identify the disorder in children through an objective measurement. He publicly announced a future research project in which he would test the device, already available on the Polish market, on children and inviting local primary schools to participate. The proposal appeared to be a screening programme that would help single out children suffering from hyperactivity. Shortly after the conference, the staff of the local educational office placed a short website notice inviting schools to contact the aforementioned academic if they were interested in taking part in the project. No mention was made about the commercial origin of the diagnostic technology to be employed. The research was introduced as being under the auspices of the university. In an interview I conducted with Professor Markovitch, he told me that interest on the side of the schools was immense, so much so to the extent that the

5 Malden is a pseudonym given to a middle size Polish town.

6 All names used in the text are pseudonyms.

email address announced on the website jammed. This jammed inbox confirms the craving which exists for firm psychiatric diagnoses in children among Polish- school-personnel. It further evidences an ongoing transformation of medical knowledge and practice and its gradual encroachment into educational spaces⁷.

I learned about the conference in the course of my fieldwork from Alina – a pedagogue working in a primary school in Malden. Alina is in her forties and has extensive experience working with children and she seems engaged in her work and perceptive of children’s problems. Her school was the first I visited regularly during my fieldwork and I came to her office twice a week to talk and observe. I was also afforded the opportunity to interview the teachers and conduct a participant observation in a class in which one of the pupils had an ADHD diagnosis. That day, in an animated voice, Alina tried to explain to me about the ADHD scanner and stated hopefully it would be possible to have it in every school so that psychologists and pedagogues could identify children in need of support and surveillance. She shared with me one more important message that she had brought back from the conference: “I imagined that children can outgrow ADHD” – she confessed.

“At the conference, there was a lady who drew our attention to the fact that a child who has such a disorder can later suffer from depression, easily become addicted, commit suicide and cause accidents” – she enumerated the ailments in a worrisome tone (*from fieldnotes*).

The research

This article is based on fieldwork conducted between 2015 and 2017 in Malden. My aim was to understand children’s experiences of the ADHD diagnosis in one location in contemporary Poland. I followed ADHD practices through different field sites in Malden (schools, homes, medical spaces and psychological centres). With different intensity, I gathered material focussing on a number of children. I used a mixed methodology depending on what was possible in each case, conducting ethnographic interviews with carers, family members, teachers, school directors, psychologists and psychiatrists. In a number of specific cases, I regularly visited some of the children’s homes. In five cases, I carried out participant observations in schools and in two cases I conducted research in focus groups with the focal child and his/her classmates. With one teacher and one mother, I worked using autoethnographic diaries. Over the course of six months, I took part in a therapeutic group for ADHD children run in a public psychological centre. In this centre, I participated in educational meetings organised

7 See Dominique Béhague’s work on the historical and contemporary expansion of psychiatric knowledge and practice (2008), Nikolas Rose’s article about the expanding scope of psychiatry (2006), a volume edited by Zsuzsa Millei and Eva Bendix Petersen focused on the ways in which the psy-complex plays out in contemporary educational spaces (2016) or Valerie Harwood and Julie Allan’s work on a similar topic (2014).

for parents and teachers and where possible in diagnostic, therapeutic meetings or consultations with parents and/or children and kept abreast of academic research conducted in this town on ADHD when it spilled over into the educational space. I also interviewed the limited number of child psychiatrists working in Malden. Finally, but no less significantly, I worked with the diagnosed children using participatory methodology derived from new childhood studies and I followed “The Code of Good Practices in Research with Children for Social Sciences” written by the Childhood Studies Interdisciplinary Research Team at the University of Warsaw (Maciejewska-Mroczek *et al.* 2015; Maciejewska-Mroczek and Reimann 2017)⁸. The ethnographic material described in this paper was gathered after receiving written consent from the adults involved and oral consent for my presence during the diagnostic procedure received from the school principal and from the parents of children undertaking the test. The children participating in the diagnostic procedure were not asked for their consent by the researcher conducting the scanning procedure since it was desirable, according to protocol, not to inform the children about the purpose of the test. I had to follow suit and only queried each child whether they minded my presence in the room. My decision was an act of *ethics in practice* against my commitment to *procedural ethics*, whereby informing children about the research and procedural aims is a priority. However, in this instance for the sake of being able to observe a differently constructed research practice, I gave up on these standards⁹.

Diagnostic cultures

In medical anthropology and in the sociology of medicine, ADHD is strongly associated with the concepts of medicalisation and overmedicalisation (Conrad 2007)¹⁰. On a very general level, medicalisation means to make medical what was not treated as such previously¹¹. This was certainly the case with hyperactive, impulsive and inattentive behaviours in children which first started to be described in medical language in the eighteenth century. The ADHD label has a long and well-studied social and conceptual history (see Gorzkowska and Smachowiec 2012) and the biography of

8 The methodology of the research and ethical principles guiding it are described in detail in my monograph (Witeska-Młynarczyk 2019).

9 For a discussion about pragmatic research to ethics in research practices with children see the work of Cindy Dell Clark (2011), Marilyns Guillemain and Lynn Gilliam (2004), Anna Witeska-Młynarczyk (2018b).

10 Ilina Singh has noticed that ADHD in Social Sciences is surrounded by a discourse of suspicion and worries about the social construction of disorder. She has postulated a more constructive approach to biomedical practices evolving around ADHD (Singh 2011, 889).

11 For a detailed discussion of the concept of medicalisation in the context of ADHD see the works of Peter Conrad (1976, 1992, 2007). A similar concept, that of biomedicalisation, was proposed by Adel Clarke *et al.* (2003). In Polish literature, a solid discussion of both concepts can be found in Michał Nowakowski's book (2015).

this diagnostic category is illustrative of a wider trend involving the transformation of contemporary psychiatric knowledge and practice (see Béhague 2017; Béhague and Lézé 2015; Mills 2014; Witeska-Młynarczyk 2018a) into a more neurobiologically oriented one (Choudhury 2010), more reliant on pharmacotherapy (Mills 2018, 2014) and inclusive of younger and younger populations (Hollin and Pilnick 2015). What I describe in this text reveals much about the very local context of Malden, and about the larger processes of reformulation of contemporary childhoods.

Svend Brinkmann called a contemporary situation in which human suffering is being increasingly interpreted in terms of psychiatric conceptions and diagnostic categories as “diagnostic cultures” (Brinkmann after Nissen and Bech Risør 2018). Both enlarged disease definitions¹² and the increasing use of testing enabled by new technological developments constitute the key stimuli feeding diagnostic cultures (Nissen and Bech Risør 2018, 19). The medicalisation of human life is no longer understood as a top-down project (Clarke *et al.* 2003; Nowakowski 2015). It is developing on many fronts with different depth and pace as a consequence of actions taken by many medical and lay actors, as well as being sustained by newly emergent concepts and artefacts (Clarke *et al.* 2003). The encroachment of contemporary diagnostic cultures on childhoods necessarily brings about ethical and political concerns, resulting in alterations in human self-understanding, a redirection of attention and action, as well as the instigation of changes in the way both children and care are conceptualized. For Brinkmann, one of the main questions to reflect upon is whether

“there is indeed a growth in ill health, or whether the proliferation of diagnoses, supported by new diagnostic practices and technologies, reflects a tendency to pathologize certain behaviours as disease” (Nissen and Bech Risør 2018, 12).

Overdiagnosis remains one of the main issues discussed in sociological literature in relation to ADHD (see Wessely and Singh 2015). Further investigation needs to be undertaken into the disorderly diagnostic process beginning at school with a preliminary scanning programme which results in a number of children entering a grey zone holding uncertain diagnoses.

The story of the ADHD scanner is a story of a tool which promises certainty and objective measurement to people who in their everyday work face a growing number of children whose behaviours can be categorised as impulsive, hyperactive and inattentive¹³. Particular care must be taken in making diagnostic tools and psychiatric

12 See for example Peter Conrad’s and Deborah Potter’s work on the expansion of ADHD diagnostic category to adults (2000).

13 In interviews and small chats which were conducted with teachers during my research one motif came up repetitively – that of an ADHD epidemic. People I talked to often reflected upon differences between generations claiming that contemporary children have changed, that it has become more difficult to work with them and that many of them seem inattentive and hyperactive.

labels available in educational spaces for a number of reasons such as stigma, ableism¹⁴, sanism¹⁵ and adultism¹⁶ (Lieghio 2016; LeFrançois 2008; Witeska-Młynarczyk 2019). Other reasons for care include the fact that labels tend to stick to disadvantaged kids (Blum 2011) and also because they strengthen the binary opposition of normal and abnormal (Lieghio 2016). My aim here is not to offer to the reader an anti-medical or anti-technological text, as I find contemporary neurobiological explorations fascinating and valuable. What I want is to shed light on the social life of the new knowledge and to propose a critical reading of real life situations. The role of the ethnographer is to describe how new technological developments change people's lives, among others, by providing new interpretative frameworks (Penkala-Gawęcka 2017, 185). In this text, how an expanding diagnostic culture thrives in one locality and how new technological solutions are entangled with commercial interests, academic careers, educators' search for solutions, and individual biographies will be highlighted ethnographically.

ETHNOGRAPHIC FRAGMENT 2

It was early June 2017 in Malden, nearly eight o'clock in the morning when I parked my bicycle in front of a large educational compound comprising of a primary, middle and secondary school. I had scheduled an appointment with three people: Anette – a woman in her thirties who works as a school psychologist, Marek, same age as Anette, who works as a school pedagogue, and Magda – a student in her twenties, pursuing an MA degree at a local university. The latter is a member of Professor John Markovitch's research team and the day in question, she was due to test a new device for diagnosing ADHD in children in this school. The kids were chosen by elementary education teachers as those "suspected of ADHD". The parents had already signed a consent form given to them by the educators. Magda agreed for me to observe her conducting research. She entered the building not much later than myself, carrying a laptop bag over her shoulder, a black suitcase in her left hand and a long leather case in the other. These intriguing items later turned out to belong to the neuroscientific world. Anette led us to the room where the examination was to be conducted. Magda rearranged the tiny classroom according to her research protocol and together with Marek removed the tables and chairs in order to create the empty space of specified dimension required by the test protocol. On one end of the room they placed a desk

14 Ableism – prejudice and discrimination against disabled people.

15 Sanism – prejudice and discrimination against people recognised as suffering from mental illness or being neuroatypical or those who are recognised by society as unhealthy.

16 Adultism – discrimination against young people based on the conviction that adults are rational, wise and mature while children and young people are immature and incapable of making rational decisions.

with a laptop. On the other side, Magda fixed a chair for children. A young researcher set up the apparatus – the ADHD scanner based on Doppler radar technology which was to examine attention and the ways in which children react to specific stimuli, as well as their propensity to move. Alas, it is impossible that everything be arranged according to the protocol when research is being undertaken in schools.

“A chair was required to be a certain type, but schools do not have such chairs, so, sometimes they tried to give the child something to rest its legs upon”
– Magda complained when inspecting an adult chair on which six and seven years old children were expected to sit.

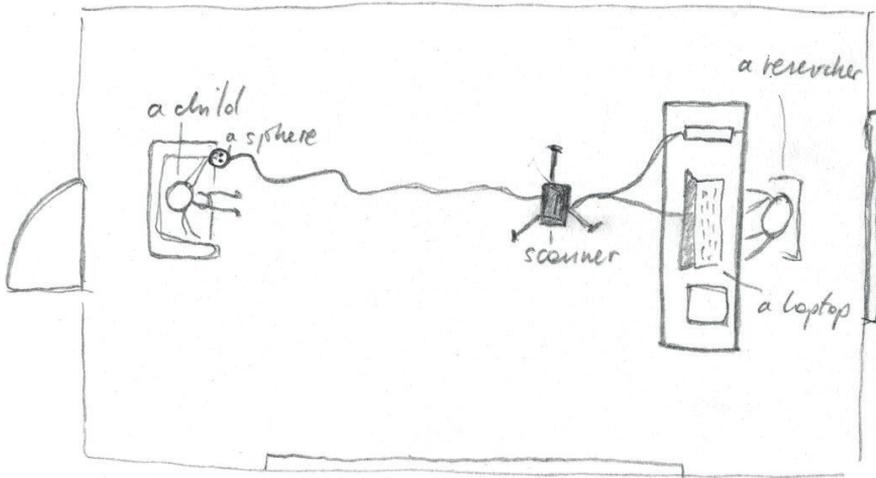


Figure 1. The arrangement of space for the test (a drawing from fieldnotes).

Diagnoses go to school

One important element of medicalising childhoods and human development is the growing involvement of non-medical personnel in diagnostic processes, in particular, the involvement of schools in spotting developmental disorders (see Meckel 2013; Armstrong 1983, 1994) and thus prompting further diagnoses. It is evident from other ethnographic contexts that in the case of ADHD, lay people play an increasingly significant role in accomplishing the routine work of medicalisation (Conrad

and Bergey 2014; Malacrida 2004). Valerie Harwood and Julie Allan characterise the contemporary moment as one in which there is no hesitation:

“[T]he current climate in education is one of acceptance and promotion of psychopathology as the default explanation of problems” (Harwood and Allan 2014, 18–20).

The jammed mailbox of Professor Markovitch confirms this hypothesis.

Mary Ebeling (2011) studying Premenstrual Dysphoric Disorder (PDD) and the promotion of self-diagnosis within pharmaceutical marketing campaigns in the United States discussed ways in which the commercial promotion of self-diagnosis and efforts on the side of pharmaceutical marketing reconfigure patients into consumers “who actively seek out diagnosis and treatments based upon their self-assessments of symptoms” (Ebeling 2011, 826). The idea behind the ADHD scanner, as submitted to school personnel, was that in the future, with the aid of this device, screening practices would possibly take place in schools and they would be run by staff members. Following this line of thinking, I suggest considering the encroachment of preliminary diagnostic practices into Polish educational institutions in the light of sociological literature concerned with the contemporary increase in self-diagnoses (Clarke and James 2003; Ebeling 2011; Stockl 2007) and biomedicalization (Clarke et al. 2003). Self-diagnosis normally refers to the patient’s preoccupation with his or her health. Yet, in the case of children, it is commonly adult carers who take the diagnosing steps. In the case of school children, a triangle consisting of parents, teachers and psychological experts play a key role in fuelling the demand for a medical diagnosis. Yet, some larger actors (including transnational and governmental ones) are also involved in this process.

Before the scanner was tested in the school, a number of actions were taken in Poland by various commercial actors (pharmaceutical companies and companies selling neuroscientific know-how and technology, entities providing complementary products used for treatment) allied with non-commercial entities (doctors, officials and lay activists). The actions taken by these actors were meant to increase knowledge about ADHD in Polish society, promote self-diagnoses and legitimize particular treatments. Following Lakoff (2005), I recognize these as an integral part in the process of the creation of standard regimes that would allow the emergence of zones of potential circulation of the scientific object I am interested in.

Christine B. Philips (2006), in her short article, calls teachers “brokers for ADHD and its treatment”, because they are the ones who single out children with “abnormalities” in the first place. Such was the case in the school in Malden, where teachers proposed pupils for testing. Yet, in order to become brokers, teachers have to gain knowledge about the disorder. Philips draws attention to the role of the pharmaceutical industry in this process. In Poland, the formulation of professional education about ADHD for teachers has come as a concerted effort of leading Polish child and youth psychiatrists,

pharmaceutical companies, NGOs and the state including local bureaucracies (Witeska-Młynarczyk 2019)¹⁷. A good example is the educational programme “Dziecko i świat za pan brat” [“A child and the world-brothers in arms”] implemented by Janssen-Cilag – a company producing and distributing a pharmaceutical product named Concerta used in treating ADHD in children. The programme kicked off in 2010 under the auspices of the Ministry of Education and the Ministry of Health. It was planned as a long term project whose aims were to organise complimentary lectures and workshops for Polish-school-personnel by major expert figures in ADHD in Poland. Furthermore, the plan included the printing of educational materials about the disorder for teachers and parents, as well as the launching of an educational campaign in the mass media (Witeska-Młynarczyk 2019). During my research, I met teachers who were enthusiastic about the programme, such as a pedagogue from a primary school in Malden:

[Pedagogue:] There was a lot of valuable materials! For the teachers, for the school, for the parents. I even made available booklets which I gave to the parents of children I knew were facing such problems. (...)

[Me:] How did the programme reach you?

[Pedagogue:] Well... I follow what happens in Malden, what is available. I cannot recall now, but I was reading a variety of websites run by the Ministry of Education or by the Centre for Education Development or the local centre organising professional education for teachers, I met colleagues on sessions devoted to this methodology and there were materials available there too. (...)

[Me:] Did you get the materials?

[Pedagogue:] Not only did I attend the workshop. (...) but we also met in a larger circle, where there were psychologists, educators working in schools and psychiatrists. The workshop was led by a psychiatrist. (...) Obviously it was sponsored by a pharmaceutical company. (...) Even this year, I gave such a booklet to a parent”.

Another pedagogue spoke about the meetings organised as a part of the same programme:

“There was a very important part devoted to the consequences of ADHD and what the potential risks are if an ADHD child is not properly managed. They mentioned the percentage of suicides and the need to support the children pharmacologically”.

Teachers’ role in diagnosing is actually written into psychiatric technologies such as the DSM¹⁸. Diagnostic standards demand that the symptoms typical of ADHD are

17 “Dziecko i świat za pan brat” has been described on the websites of local educational departments as a long-term educational campaign targeting school personnel. Its broad aim was identified as the dissemination of knowledge about ADHD (see www.kuratorium.waw.pl. Access: 06.09.2018).

18 Andrew Lakoff uses a term “liquidity” to enable a discussion of ways in which illness is made abstract and therefore exchangeable. He underlies the power of the diagnosis to produce an equivalence and allows for an emergence of an epidemiological population, which has potential of constituting a market segment (Lakoff 2005).

observed in a child in at least two different environments, which typically implies family and school. Philips noticed that the diagnostic criteria “accord teachers a formal role in diagnosis through specialised assessment instruments such as the Conners Teacher’s Rating Scale” (2006, 433) – which is a list of questions about a child’s behaviours that teachers have to choose an answer for. This scale is also used in diagnostic practice in Poland as a one- page- long form which lists eighteen questions concerning the symptoms of hyperactivity, impulsivity and inattention¹⁹. The space for the educators’ voice, as it is crafted in psychiatric diagnostic technology, does not imply an open collaboration or active participation. Teachers fill out the forms brought by the parents and parents serve as intermediaries between the medics and educators. A conversation with an educator is not a part of the diagnostic standard²⁰.

As argued by Harwood and Allan:

“Contemporary assessments of child mental problems are (...) informed by psychiatric categories from the DSM, with this system increasingly used in schools, and especially in the determination of the identification of problems that require financial support” (2014, 18–20)²¹.

Such a questionnaire was also a part of Professor John Markovitch’s research scenario. The DSM element rooted the research project in legitimate psychiatric knowledge and technology. It allowed for inclusion into the experimental diagnostic procedure an element of the standard one.

Yet, teachers also play a more informal role in preliminary diagnostic work (Dew and Jutel 2014) and are called by Philips “disease-spotters” (2006, 434)²² – i.e. the initiators who push families onto their diagnostic journeys. The role of Polish teachers and their influence on the increase of diagnoses, has yet to be researched. My ethnographic work suggests that the role of school personnel in singling out children with ADHD increases, yet, the picture seems inconclusive, as the label is also often contested by educators (Witeska-Młynarczyk 2019). Philips described the entire process as an “organized penetration of the pharmaceutical industry associated with ADHD into the education domain” (2006, 434). She underlines that the materials provided by these companies “channel the reader toward medical therapy with pharmaceutical substances” (2006, 435). However, the story of the ADHD scanner reveals that the processes involved in

19 Examples of questions for which possible answers are – „agree, quite agree, disagree” are the following: a child is excessively talkative and a child is forgetful in everyday life.

20 I saw during the research rare cases in which a psychologist diagnosing ADHD in a public psychological centre went to the school to observe children during classes.

21 See Michał Wróblewski’s work about the infiltration of the Polish educational system with neurobiological definitions of ADHD and the Americanisation of Polish psychiatry (2017).

22 A similar reflection was developed by Claudia Malacrida for Canada and Great Britain in the context of ADHD, where teachers, special educators and school psychologists “identify, assess and administer medication to «problematic» children” (Malacrida 2004, 61).

the medicalising of children's behaviours are more nuanced. The penetration of educational spaces with psychiatric knowledge is regulated by bureaucratic measures and it involves many actors whose interests sometimes converge and sometimes depart.

The brain project

The term neuropsychiatry emerged in the 1920s and became popular in the 1950s. Its purpose was to indicate that “the future of psychiatry lays in the integration of insights from genetics and neurobiology into clinical practice”. The neuro-prefix was to designate “a novel explanatory framework” (Rose and Abi-Rached 2013, 6). Horwitz and Grob note that:

“In contrast to much of medicine, where physicians can often use laboratory procedures, imaging devices, and objective observations, psychiatric definitions typically involve ambiguous, uncertain, and contested definitions; many treatments for mental illness are correspondingly unspecific and general (...). The high degree of indistinctness among psychiatric symptoms means that the development of accurate diagnostic systems is especially problematic (...)” (Horwitz and Grob 2016, 522).

In psychiatry, where the diagnosis is still based on patient-reported information (and in the case of children, carer-reported information) sometimes complemented by clinical observations, the craving for more specificity and accuracy is robust. Uncovering the biomarkers²³ for specific disorders seems particularly significant for child and adolescent psychiatry, because of the discourses of risk and early prevention. The cultural tendency to treat children-patients as incompetent is not irrelevant here. Genetic screening and neuroimaging (the main techniques for identifying biomarkers) “could be used to access children before the symptoms appear”. Early diagnosed childhood disorders already function as “biomarkers” used for identifying children at risk of more severe ailments (Singh and Rose 2009, 202). In this sense, scanning children for ADHD can be understood as a screening programme singling out kids who will be in need of long-termed assistance.

The presence of the ADHD scanner in this particular school is part of a more general shift in biomedical sciences, and in psychiatry in particular, but more so in the societies of the West, where “our brains are becoming central to understanding who we are as human beings” (Rose and Abi-Rached 2013, 2). Jonathan Rowson (2011) calls our age one of “neurological reflexivity” meaning an incorporated imperative of being conscious of ongoing neurobiological processes, feeling obliged to learn how to manage them, taking responsibility for oneself and one's children, changing one's condition and increasing one's chances for a successful life by acting upon the brain. Rose (1999) suggests that such a focus is typical for contemporary neoliberal societies where the so called “pedagogies of brain awareness”

23 A biomarker is a certain pattern of brain activity.

constitute a part of the contemporary practices of perfecting the self (Rose and Abi-Rached 2013). Thus far, mental processes were a preoccupation of behavioural and psy-sciences, yet with technological developments which allow for the looking into of the molecular level of people's lives, mental states and behaviours became explicable "in material ways as the outcome of biological processes in the brain" (Rose and Abi-Rached 2013, 10). This forecast includes a discovery of biomarkers for each disorder and the possibility of early screening and intervention (see Hollin and Pilnick 2015).

The focus on small children based on the discourse of early intervention is an integral element of the "brain project". Rose and Abi-Rached argue that "futuraity is central to contemporary problematizations of the brain" (2013, 14), and for this reason much of the research and designed interventions focus on children. Ilina Singh and Nikolas Rose note that

"many pathologies are now reframed as developmental and hence amenable to early detection and ideally to preventive intervention" (Singh and Rose 2009, 15).

The aim is "governing the future through the brain". The molecular is slowly turning into the trademark of contemporary biopolitics (Rose and Abi-Rached 2013, 12).

Neuroeconomy

One of the elements of encroaching medicalisation as called by Adele Clark and others (2003) is the commercialisation of research and an enlarging market for biotechnology. The diagnostic tool, the usage of which I have described was introduced onto the Polish market by a commercial company whose main preoccupation were electroencephalography (EEG) tests and neurobiofeedback therapy (a non-drug treatment in which people learn to control bodily processes, such as attention)²⁴. This enterprise sells both technology and know-how. In fact, to a certain extent, it is competing on the therapy market with pharmaceutical corporations. On the company's website can be read:

"based on measurements taken by the ADHD scanner, it is possible to objectively state whether the patient suffers from the syndrome of attention deficits (ADD) with hyperactivity (ADHD) or without it".

24 The method rests on the assumption that human brain is malleable. The aim is to teach the brain to work better through the usage of neurotechnology. Technically, during a session, a client is attached to an EEG machine by electrodes placed on his/her head. A real-time scan of the client's brain waves appears on the screen. A therapist gives instructions based on this image which are meant to adjust the brain waves. Frequently, this involves playing a video game and performing assigned tasks. This is done to bring changes in the brain's output which are hoped will translate into changes in behaviour. The results depend on the frequency of the sessions and the length of the period the training lasts.

The diagnosis is described as being as accurate as the Conners' tests (questionnaires created for diagnosing ADHD for parents and teachers, and most recently also for children). Reference to "objectivity" and "accuracy" are important, in particular if they are compared with actions taken by one of the pharmaceutical companies selling drugs used in ADHD related therapy. During my fieldwork, this corporation disseminated a poster on which neurobiofeedback was described as "a non-verified method of treatment", in psychiatric and psychological centres for children (Witeska-Młynarczyk 2019). The company selling the ADHD scanner in Poland however promotes bio-feedback claiming that the therapy is as effective as drugs²⁵ while additionally being non-invasive. This sounds convincing, taking into consideration the anxieties felt by parents in regards to pharmacotherapy (see Witeska-Młynarczyk 2019). The clashes amongst various entities making a profit from selling biomedical technologies – drugs, diagnostic tests, scanners, all take place in the background of projects focusing on the psychiatric health of children.

Visible here is also the convergence of commercial and academia interests. The research team of which Magda is part of aims at discussing the significance of the ADHD scanner for the objectivisation of the diagnostic practices in academic journals. Their positive conclusions may be significant for the future usage of the apparatus. Both Magda and another student also part of the research team claim that the tool they were testing allows for "objective" measurement which would eliminate uncertainty and human error often made by medical personnel.

Rose and Abi-Rached (2013, 18) coined the term "neuroeconomy" to name the described occurrences. They underline that the academic and industrial components intersect, especially when linked with the entrepreneurial spirit on the part of universities. Such a convergence of interests has resulted in me having been afforded the opportunity of observing how a number of children walk into a small classroom one by one to take part in the test in one of the public schools in Malden.

ETHNOGRAPHIC FRAGMENT 3

"[Magda:] Your name is George, yes?

[George:] Shakes his head].

[Magda:] Sit down here on this chair. You have amazing underground passages in this school. One can easily get lost.

[George:] I do not get lost.

[Magda:] Do you remember your date of birth?

25 More specifically they refer to Ritalin, which is a name under which psychostimulant drugs are sold in the USA.

- [George:] 17th of September.
 [Magda:] And what year?
 [George:] I do not know.
 [Magda:] And how old are you?
 [George:] Six.
 [Magda:] And what is your last name?
 [George:] Marcinkiewicz.
 [Magda:] I will explain everything in a minute. Are you nervous?
 [George:] No.
 [Magda:] Oh, that's great, there is nothing to be nervous about. Now, I have a sphere for you. Lean back in your chair comfortably. Your task is to press this button when there appears a square and a plus, ok?
 [George:] Ok.
 [Magda:] Let's have a trial run first.

They undergo a trial run.

- [Magda:] And you see, here, at the end there was a square followed by a plus and you have to press very fast. Your task will be exactly the same, only longer, so you will have to focus, ok?
 [George:] Ok.
 [Magda:] Can we start?
 [George:] Yes.

The task starts. Magda walks to her place in front of the laptop. She does not speak any more. She does not maintain eye contact with the boy. She does something with her phone. After ten minutes she speaks again.

- [Magda:] Was it difficult or easy?
 [George:] Difficult.
 [Magda:] It was long, wasn't it? And now there will be a second part of the task. Lean back comfortably in your chair, put your hands here. You will sit like this for a while, ok?
 [George:] Ok.
 [Magda:] The task will end when the apparatus will squeak, ok?
 [George:] Ok.

The boy, very lively, brisk and talkative now sits in an armchair without moving. He approaches the task very seriously. He does not move his feet until the last minutes of the research. After ten minutes Magda speaks again.

- [Magda:] Ok, this is the end. You made it.
 [George:] Yes.
 [Magda:] Wait a moment, I will walk you to the class [from fieldnotes]”.

Diagnosis as a process

A diagnosis is often understood as a critical moment leading to a healing procedure. It can be understood as a term or a category which puts the world in order. You get to know that your child is suffering from ADHD, learn about the disorder and how to help resulting in a gradual improvement. Yet, the diagnosis can be also understood as a process (Jutel 2018). Anthropologists and sociologists increasingly imagine it as a “diagnostic work” and as a “disorderly process” (Goodwin and McConnell 2014; Jutel 2011; Nissen and Bech Risør 2018) engaging various actors, things, ideas and places, a “doing the disease” (Mol 2002). Also, a diagnosis is no longer understood as predominantly associated with healthcare situations. It can happen in various spaces both medical and lay, as well as being capable of being shaped by expert and non-expert voices and judgements (Büscher, Goodwin and Mesman eds., 2010). Nissen and Bech Risør note that:

“Processes of a diagnosis include any activity surrounding investigations, assessments and negotiations pertaining to clinical and non-clinical judgements of ill health. Different actors with their skills, experiences and sensing bodies are involved in these processes, in conjunction with technology and instruments of measurement. Studies of such processes have explored the enactment and the making of a diagnosis with particular focus on subtle intersubjective processes between health professionals and patients” (Nissen and Bech Risør 2018, 15).

The diagnostic work performed using the ADHD scanner in various schools in Malden involved many actors, most directly the local educational office, the school, teachers, parents, the local university and the commercial company. When the act of scanning is looked at as one of many events in a longer diagnostic process, its preliminary character is clearly visible.

The grey zone

Current biomedical developments push many individuals into a grey zone – at the edge of disease or at risk of developing one. As noted by Nissen and Bech Risør (2018, 20), new technologies, biomarkers and the desire to know, play a key role in shaping the diagnostic work. The same authors envisage the role of anthropologists to be those critically studying the diagnostic landscape as perforated by risk discourses, an abundance of screening programmes, testing and the use of new technology (Nissen and Bech Risør 2018,19). I suggest viewing the described assessments as actions transforming children into “patients-in-waiting” – a form of liminality which is characteristic of contemporary healthcare (Timmermans and Buchbinder 2010). Patients-in-waiting is an umbrella term coined by Stefan Timmermans and Mara Buchbinder “for those under medical surveillance between health and disease” (2010, 1). In their article, the authors worked on ethnographic evidence referring to the screening of newly born children, yet, they also suggested that the characteristics of patients-in-waiting may

be found in other populations. One of the groups they mentioned were children with suspected developmental disabilities undergoing broad assessments.

Patients-in-waiting inhabit a liminal state between pathology and a state of normalcy. The assessments these people undergo do not necessarily result in a certain diagnosis but they may hint instead “at something” while leaving “ambivalent whether patients-in-waiting are already sick, are going to become sick and, if so, what their sickness will entail” (Timmermans and Buchbinder 2010, 417). The authors suggested that the uncertainty of disease is imposed on the patients and should be understood as a by-product of the logic of the population screening programmes in which “for every true positive case there are many more cases with uncertain results” (Timmermans and Buchbinder 2010, 417). They argued that:

“The production of patients-in-waiting relates to the way screening and testing is implemented with shifting alliances between vocal patient groups, testing companies, and public health programs, combined with varying heuristic practices for interpreting results” (Timmermans and Buchbinder 2010, 418).

ETHNOGRAPHIC FRAGMENT 4

In a school corridor, nine-year-old Steven is waiting to be the first to take part in the test. He is the only one accompanied by a parent today. When Steven walks into the room to undergo the test, I ask his mom how it happened that they were there. She recounts a story of a very calm and gifted boy, who, when he started school, knew how to read and knew much more than other kids.

“Steven was very obliging and mannerly in the first grade. Later, he started to, maybe not be rude, but to differ from the pattern she [the teacher – AWM] envisaged (...). And problems started – he did this, and he disturbed other children”.

The mother never thought of Steven as in need of tests or psychological assistance. When I asked her about her knowledge of the disorder, she said:

“The notion appeared a while ago [the ADHD – AWM] and I heard it somewhere – this is how all naughty children are labelled. They do not know how to deal with them and the easiest way is to say that a child has ADHD. Yet, whether these children have ADHD for real or if they are simply, I do not know, whether this is solely a question of an abundance of energy (...).”

Steve’s mother’s words display a lack of medical knowledge about the disorder or may even be interpreted as an anti-medical stand. Yet, even with such a starting point, the woman seems ready to enter the diagnostic process proposed by the teacher. Steve’s mother holds the teacher responsible for her child’s problems at school. Her motivation

for making Steve participate in the test is to show the teacher that the latter has been mistaken about her son and that she should have given him more tasks if he was bored because he did everything faster than the rest of the class.

“[Steven’s mother:] She [the teacher – AWM] also told me that (...) it was not only her who complained – the teacher of religion, the English teacher – they all say that Steve disturbs, that he cannot focus, that he starts one action and fails to finish it. She wrote me once (...) that there would be such and such an examination and whether I would like my child to participate. I suppose that this was done to show my child up and indicate that he is abnormal, autistic or something of that sort. But he is simply different, has more energy, does things faster, and maybe he needs more incentives, so I said – ‘So what have I got to lose in the circumstances?’ (...) If it turns out that Steve has ADHD, well, I do not know what it means for later, for his adult life, or for his teens and whether I indeed should worry and do countless tests. I assume that the psychologist will tell me”.

During our short conversation, there also came a moment of transition, when the woman started to look for symptoms:

“It is true that when he does homework, he does not do it alone, because he does not want to stay in the room by himself. He prefers to stay with me. I am doing things in the kitchen and he sits at the table. I am working and he sits. When he sits down and something piques his interest he will sit and do it”.

This day marked the beginning of Steve’s ADD story.

The results

After a few months, the school received a “psychological opinion” about each participant. An affirmative diagnosis, such as the one below, constitutes the beginning of a diagnostic journey and the conferring of an identity on a patient-in-waiting meaning for one of the children who took part in the diagnostic procedure:

“Based on the research that took place on 3rd of June 2016 employing an ADHD scanner and a questionnaire for the evaluation of ADHD symptoms, the following can be stated:

- In terms of hyperactivity measured in a state of inaction, the child did not reveal any malfunction, which means that he is able to restrain from physical movement when required. In a task situation the physical activity remained at a normal level.
- In terms of evaluation of attention deficits, the child revealed serious difficulties;
- In the questionnaire-based evaluation the child revealed severe disorders both in terms of attention deficits and hyperactivity;
- The outcomes of the objective measurements confirm that the symptoms indicated by the teacher were present.

The discrepancy of the outcomes based on objective and subjective measurements of hyperactivity may suggest that the unwanted behaviour of a child results, to a significant extent, from environmental factors. The appropriate treatment of a child in its surroundings can decrease the exacerbation of the disorder in everyday life.

To put it succinctly, it was possible to diagnose this child with ADHD attention deficit type”.

The opinion given bares an official university stamp and the signature of Professor Markovitch. This paper marked one child as suffering from ADHD but many more questions arise including what the real consequences of this situation are, is this opinion already a diagnosis and how should it be interpreted and what to do about it?

ETHNOGRAPHIC FRAGMENT 5

On an autumnal day, at the psychological centre on Meadow Street in Malden²⁶, I asked a psychologist and a pedagogue working there about a mother, who stepped into the room during our conversation asking about the possibility of attending some help session in regards to her son diagnosed with ADHD. The personnel looked at me and said:

“A strange story. A child was examined by someone from academia. The mother came with a piece of paper stating the child has ADHD. Yet, what are we to do with it? To acknowledge this diagnosis? But on what basis? How was this diagnosis made? No, I do not see it – ADHD. Anyhow, he changed school. We will see how he will now function [from fieldnotes]”.

In autumn of the same year, I met Maria (– a speech therapy student pursuing a PhD on the topic of ADHD and speech problems) at the same psychological centre. She had come to the centre because she was searching for kids who had already been diagnosed to involve them in her research project. A psychologist working there alluded to Professor Markovitch’s teams’ diagnoses as a possible pool of research participants. Almost immediately, a discussion ensued about the validity of these diagnoses. People working there recounted a number of stories about children who had come to the centre with these diagnoses stressing the difficulty of their situations, in particular, because Professor Markovitch was a well-known specialist. Maria eventually took the position of inviting, only those kids who received diagnoses from a psychiatrist or from the psychological centre on Meadow Street – where a team of psychologists trained by Warsaw psychiatrists performed diagnostic work, to participate in her research. Nonetheless, a number of parents and their kids remain in limbo, looking for proper support for their children, post the issuing of a preliminary diagnosis issued as a result of scanning.

26 This institution specialising in diagnosing ADHD was one of my field sites.

CONCLUSION

From the 1960s onwards, an increased focus on neuronal functioning at a molecular level which, in turn, has fuelled technological innovations can be observed. One of the motives behind this was the search for reliable psychiatric diagnoses based on biological and physiological markers. The ongoing processes of biomedicalisation translated into the entrance of diagnostic technologies and knowledge into non-medical spaces, as well as their commercialisation and appearance under multiple forms (one of them being the ADHD scanner). Bearing in mind “the screen and intervene” logic characterising this “neuro project” and state health policies, schools have become a natural ally in testing new concepts and tools. They have become a natural laboratory, in which, as the ADHD scanner story reveals, various interests intersect and clash resulting in palpable tensions rising to the surface. Through the promotion of instruments capable of being used by a lay person, “diagnostic power is removed from the exclusive purview of medical authority” (Ebeling 2011, 831) and placed in the hands of adult carers on whom the child patient depends. This move does not only “redistribute power within medically mediated relationships” (Ebeling 2011, 831), but also sets in motion a complicated process of negotiation and meaning making, involving many actors and machines under which no one really holds control and the result of which is in each case uncertain. This generates feelings of anxiety and confusion in children and their families who get drawn into the process of the diagnosis of ADHD (Witeska-Młynarczyk 2019).

Some social scientists have signalled that the processes involved in the biomedicalization of childhood are not neutral and require much more ethical consideration. As noted by Nikolas Rose, new technologies may be used outside the laboratory and medical context “with consequences that ignore the multiple problems of interpretations and reliability that are inherent in these new technologies” (Rose 2014, 1214). Such a state of affairs seems to have arisen with the diagnoses produced by Professor John Markovitch’s team, which have brought about a lot of ferment, despite the claim being made that they are simply an objective measurement and a helpful guide bringing parents closer to legitimate diagnoses.

The main concerns mentioned by Singh and Rose (2009) point to both the social and ethical problems posed by the use of biomarkers in psychiatry and include a focus on individual-level risk factors rather than on environmental and social issues. Laurence Kirmayer and Ian Gold would call this a reductionist perspective (2012). Singh and Rose postulate retaining complexity (2009), while Kirmayer and Gold put forward the postulate of “resocializing psychiatry” (2012) which has become overtly biologized. Furthermore, more questions need to be addressed such as those about the commercialisation and marketing of biomarker data in regard to child development, psychiatric conditions, emotional and cognitive capacities, as well as their consequences for the

decisions taken by families (Singh and Rose 2009). In the case of the ADHD scanner, what is worrying is the fact that the research process was understood by both school personnel and parents alike as an actual diagnosis, when in fact it was no more than an uncertain screening procedure that turned children into patients-in-waiting. The ADHD diagnostic processes I have followed in my research project were fundamentally social in the sense that they resembled patchwork-like diagnoses (see Gardner et al. 2011) involving numerous actors, instruments, knowledges and social spaces. Preliminary diagnoses that have been undertaken with an ADHD scanner have proved particularly problematic as they have not been recognized by actors who are routinely involved in the diagnostic processes of children dealing with problems of children retaining attention, hyperactivity and impulsiveness. It seems that the zones of potential circulation of medical knowledge and practice are in place in Polish schools, yet, the regulatory regimes are somewhat lacking (see Lakoff 2005).

Finally, a crucial ethical issue concerns the ways in which children are treated in such semi-diagnostic and semi-academic situations. They are not provided with information about the purpose of the test, about the reasons why it is being conducted and what getting tested means for them. In addition, they are not even directly asked whether they want to participate, nor is respected their capacity to make decisions about the complex issues that often rise as a result considered (see Singh and Rose 2009).

BIBLIOGRAPHY

- Armstrong D. 1983. *Political Anatomy of the Body. Making Knowledge in Britain in the Twentieth Century*. Cambridge, London, New York, New Rochelle, Melbourne, Sydney.
- Armstrong D. 1994. Bodies of Knowledge/Knowledge of Bodies. In J. Colin and R. Porter (eds.), *Reassessing Foucault: Power, Medicine and the Body*. London, New York, 17–27.
- Béhague D. 2008. The Domains of Psychiatric Practice: From Centre to Periphery. *Cultural Medical Psychiatry* 32 (2), 140–151.
- Béhague D. 2017. Psychiatry, Sex, and Science. The Making of “Adolescent” Motherhood in Southern Brazil. *Medical Anthropology* 28 (1), 1–16.
- Béhague D. and Lézé S. 2015. Shaping the Modern Child. Genealogies and Ethnographies of Developmental Science. *Social Science and Medicine* 143, 249–254.
- Bendix Petersen E. and Millei Z. (eds.) 2016. *Interrupting the Psy-Disciplines in Education*. London.
- Blum L. 2011. “Not This Big, Huge, Racial-Type Thing, but...”: Mothering Children of Color with Invisible Disabilities in the Age of Neuroscience. *Sings: Journal of Women in Culture and Society* 36 (4), 941–967.
- Büscher M., Goodwin D., Mesman J. (eds.) 2010. *Ethnographies of Diagnostic Work. Dimensions of Transformative Practice*. New York.
- Choudhury S. 2010. Culturing the Adolescent Brain: What Can Neuroscience Learn from Anthropology? *SCAN* 5, 159–167.
- Clark C. D. 2011. *In A Younger Voice. Doing Child-Centred Qualitative Research*. Oxford.

- Clarke A., Mamo L., Fishman J.R., Fosket J.R., Shim J.K. 2003. Biomedicalization: Technoscientific Transformations of Health, Illness, and U. S. Biomedicine. *American Sociological Review* 68 (2), 161–194.
- Clarke J.N. and James S. 2003. The radicalized self: the impact on the self of the contested nature of the diagnosis of chronic fatigue syndrome. *Social Science and Medicine* 57(8), 1387–1395.
- Conrad P. 1976. *Identifying Hyperactive Children. The Medicalization of Deviant Behaviour*. Lexington, MA.
- Conrad P. 1992. Medicalization and Social Control. *Annual Review of Sociology* 18, 209–232.
- Conrad P. 2007. *The Medicalization of Society: On the Transformation of Human Conditions into Treatable Disorders*. Baltimore.
- Conrad P. and Bergey M. 2014. The Impending Globalization of ADHD: Notes on the Expansion and Growth of a Medicalized Disorder. *Social Science and Medicine* 122, 31–43.
- Conrad P. and Potter D. 2000. From Hyperactive Children to ADHD Adults: Observations on the Expansion of Medical Categories. *Social Problems* 47 (4), 559–582.
- Daston L. (ed.) 2000. *Biographies of scientific objects*. Chicago, London.
- Dew K. and Jutel A. 2014. Introduction. In K. Dew and A. Jutel (eds.), *Social Issues in Diagnosis. An Introduction for Students and Clinicians*. Chicago, IL, 1–14.
- Ebeling M. 2011. “Get with the Program!”: Pharmaceutical marketing, symptom checklists and self-diagnosis. *Social Science and Medicine* 73, 825–832.
- Gardner J., Dew K., Stubbe M., Dowell T., Macdonald L. 2011. Patchwork diagnoses. The production of coherence, uncertainty, and manageable bodies. *Social Science and Medicine* 73, 843–850.
- Goodwin D. and McConnell T. 2014. Diagnostic Work: A Disorderly Process. In: K. Dew and A. Jutel (eds.), *Social Issues in Diagnosis. An Introduction for Students and Clinicians*. Chicago, IL, 33–46.
- Gorzowska I. and Samochowiec J. 2012. Historia zaburzenia hiperkinetycznego (ADHD) na świecie i w Polsce przed ICD-10 i DSM IV-TR. *Psychiatria* 9 (3), 91–99.
- Guillemin M. and L. Gillam. 2004. Ethics, Reflexivity, and “Ethically Important Moments” in Research. *Qualitative Inquiry* 10(2), 261–280.
- Harwood V. and Allan J. 2014. *Psychopathology at School: Theorizing Mental Disorders in School*. London.
- Hollin G. and Pilnick A. 2015. Infancy, Autism, and the Emergence of a Socially Disordered Body. *Social Science and Medicine* 143, 279–286.
- Horwitz A. and Grob G. 2016. The Troubled History of Psychiatry’s Quest for Specificity. *Journal of Health Politics, Policy and Law* 41 (4), 521–539.
- Jutel A. 2011. *Putting a Name to It. Diagnosis in Contemporary Society*. Baltimore.
- Jutel A. 2018. Foreword. In N. Nissen and M. Bech Risør (eds.), *Diagnostic Fluidity: Working with Uncertainty and Mutability*. Tarragona, 7–10.
- Kirmayer L. and Gold I. 2012. Re-Socializing Psychiatry. Critical Neuroscience and the Limits of Reductionism. In S. Choudhury and J. Slaby (eds.), *Critical Neuroscience: A Handbook of the Social and Cultural Contexts of Neuroscience*. Malden, Oxford, Sussex, 307–330.
- Lakoff A. 2005. Diagnostic liquidity: Mental illness and the global trade in DNA. *Theory and Society* 34, 63–92.
- Latour B. 2000. On the Partial Existence of Existing and Nonexisting Objects. In L. Daston (ed.), *Biographies of scientific objects*. Chicago, London, 247–269.
- LeFrançois B. 2008. “It’s Like Mental Torture”: Participation and Mental Health Services. *International Journal of Children’s Rights* 16, 211–227.

- Lieghio M. 2016. Too Young to be Mad: Disabling Encounters with 'Normal' from the Perspectives of Psychiatrized Youth. *Intersectionalities: A Global Journal of Social Work Analysis, Polity, and Practice* 5 (3), 110–129.
- Maciejewska-Mroczek E., Radkowska-Walkowicz M., Reimann M., Witeska-Młynarczyk A., Boni Z., Krawczak A. 2015. *The Code of Good Practices in Research with Children for Social Sciences*, www.childhoods.uw.edu/664-2/ accessed 05.03.2019.
- Maciejewska-Mroczek E. and Reimann M. 2017. Kodeks dobrych praktyk w badaniach z dziećmi. O potrzebie tworzenia zasad prowadzenia badań z udziałem dzieci. *Miscellanea Anthropologica et Sociologica* 18(3), 11–23.
- Malacrida C. 2004. Medicalization, Ambivalence and Social Control. *Health: An Interdisciplinary Journal* 8 (1), 61–80.
- Meckel R. 2013. *Classrooms and Clinics. Urban Schools and the Protection and Promotion of Child Health, 1870–1930*. New Brunswick, New Jersey, London.
- Mills Ch. 2014. Psychotropic Childhoods. *Global Mental Health and Pharmaceutical Children. Children & Society* 28 (3), 194–204.
- Mills Ch. In 2018. Children's Mental Health: Controversy, Complexity and Contestation. In H. Montgomery, M. Robb (eds.), *Children and Young People's Worlds*. Maidenhead, 247–264.
- Mol A. 2002. *The Body Multiple. Ontology in Medical Practice*. Durham, London.
- Nissen N. and Bech Risør M. 2018. Configurations of Diagnostic Processes and Practices: An Introduction. In N. Nissen and M. Bech Risør (eds.), *Diagnostic Fluidity: Working with Uncertainty and Mutability*. Tarragona, 11–32.
- Nowakowski M. 2015. *Medykalizacja i demedykalizacja. Zdrowie i choroba w czasach kapitalizmu dezorganizowanego*. Lublin.
- Penkala-Gawęcka D. 2017. Medykalizacja w perspektywie antropologii medycznej. In M. Nowakowski and W. Piątkowski (eds.), *Procesy medykalizacji we współczesnym społeczeństwie*. Lublin, 173–194.
- Philips Ch. 2006. Medicine Goes to School: Teachers as Sickness Brokers for ADHD. *PLOS Medicine* 3 (4), 433–435.
- Rose N. 1999. *Governing the Soul. The Shaping of the Private Self*. London, New York.
- Rose N. 2006. Disorders without Borders? The Expanding Scope of Psychiatric Practice. *BioSocieties* 1 (4), 465–484.
- Rose N. 2014. The Human Brain Project: Social and Ethical Challenges. *Neuron* 82 (6), 1212–1215.
- Rose N. and Abi-Rached J. 2013. *Neuro. The New Brain Sciences and the Management of the Mind*. Princeton, Oxford.
- Rowson J. 2011. *Socializing with the Brain*. London.
- Singh I. 2011. A Disorder of Anger and Aggression: Children's Perspectives on Attention Deficit/Hyperactivity Disorder in the UK. *Social Science and Medicine* 73, 889–896.
- Singh I. and Rose N. 2009. Biomarkers in Psychiatry. *Nature* 460 (9), 202–207.
- Stockl A. 2007. Complex syndromes, ambivalent diagnosis, and existential uncertainty: the case of Systemic Lupus Erythematosus (SLE). *Social Science and Medicine* 65(7), 1549–1559.
- Timmermans S. and Buchbinder M. 2010. Patients-in-Waiting: Living between Sickness and Health in the Genomics Era. *Journal of Health and Social Behavior* 51 (4), 408–423.
- Wessely S. and Singh I. 2015. Childhood: A Suitable Case for Treatment. *Lancet Psychiatry* 2, 661–666.
- Wróblewski M. 2017. Biomedycyna w sieciach globalizacji. O wędrujących zaburzeniach psychicznych na przykładzie ADHD. In M. Nowakowski and W. Piątkowski (eds.), *Procesy medykalizacji we współczesnym społeczeństwie*. Lublin, 147–170.

- Witeska-Młynarczyk A. 2018a. Enacting ADHD diagnosis in the landscape of care in Poland. In N. Nissen and M. Bech Risør (eds.), *Diagnostic Fluidity: Working with Uncertainty and Mutability*. Tarragona, 55–82.
- Witeska-Młynarczyk A. 2018b. Etyka dnia codziennego w badaniach etnograficznych z dziećmi z diagnozą ADHD. Opis warstwowy. In M. Radkowska-Walkowicz and M. Reimann (eds.), *Dzieci i zdrowie. Wstęp do childhood studies*. Warsaw, 61–79.
- Witeska-Młynarczyk A. 2019. *Dziecięce doświadczenia ADHD. Etnografia spornej jednostki diagnostycznej*. Warsaw.

Author's address

Anna Witeska-Młynarczyk PhD
Institute of Ethnology and Cultural Anthropology
University of Warsaw
ul. Żurawia 4
Warsaw 00-503, POLAND
e-mail: a.witeska-mlyn@uw.edu.pl
ORCID: 0000-0001-6300-8083