**REVIEW** 

of the official reviewer for dissertation work Duisebayeva Aibubi Imanalievna on the theme «The animal face of imperial power: Kazakh animal husbandry and tsarist veterinary services, 1868-1917» presented for the degree of Doctor of Philosophy (PhD) in the specialty «History».

No	Criteria	Eligibility (one of the options must be checked)	Justification of the position of the official reviewer
1.	The topic of the thesis (as of the	1.1 Compliance with priority areas of science development or government programs:	This dissertation appears in full compliance to this reviewer.
	date of its approval) corresponds to	1) The thesis was completed within the framework of a project or target program financed from the state budget (indicate the name and number of the project or program)	All yes, I believe.
	the directions of development of	2) The thesis was completed within the framework of another state program (indicate the name of the program)	
	science and/or state programs	3) The dissertation corresponds to the priority direction of the development of science, approved by the Higher Scientific and Technical Commission under the Government of the Republic of Kazakhstan (indicate the direction)	
2.	Importance for	The work makes/does not make a significant contribution to science, and its	This dissertation makes a significant
	science	importance is well disclosed/not disclosed	contribution to science via its empirically detailed and theoretically sophisticated contribution to understandings of the history veterinary science in Kazakhstani lands, especially the Turgai region, in the late imperial period.
3.	The principle of independence	Self-reliance level:  1) High; 2) Medium; 3) Low; 4) No independence	1) This dissertation clearly demonstrates a high level of independent scholarly initiative. This is evident in its wide ranging of sources, mixing of historiography and theory, and attentiveness to the significance of the history on

			multiple registers.
4.	The principle of inner unity	<ul> <li>4.1 Justification of the relevance of the thesis:</li> <li>1) Justified;</li> <li>2) Partially justified;</li> <li>3) Not justified.</li> </ul>	The student justifies all arguments laid out in the introduction in the subsequent chapters.
		4.2 The content of the thesis reflects the topic of the thesis:  1) Reflects; 2) Partially reflects; 3) Does not reflect	The content of the thesis completely reflects the topic.
		<ul> <li>4.3. The purpose and objectives correspond to the topic of the thesis:</li> <li>1) correspond;</li> <li>2) partially correspond;</li> <li>3) do not correspond</li> </ul>	The objectives and purpose of the dissertation completely correspond to the topic.
		<ul> <li>4.4 All sections and provisions of the thesis are logically interconnected:</li> <li>1) completely interconnected;</li> <li>2) the interconnection is partial;</li> <li>3) there is no interconnection</li> </ul>	The sections are clearly connected. The chapter on veterinary medicine in service of the imperial state (chapter 2) was the longest and one could imagine breaking it up differently so that section 2.2 was its own chapter on animal disease as an arena of state intervention. That is a small matter, however, and would only help with balancing the length of the chapters rather than improving the interconnectedness of the sections.
		<ul> <li>4.5 The new solutions (principles, methods) proposed by the author are reasoned and evaluated in comparison with the known solutions:</li> <li>1) there is a critical analysis;</li> <li>2) partial analysis;</li> <li>3) the analysis does not represent one's own opinions, but quotes from other</li> </ul>	There was deep critical analysis in this thesis the brought in multiple theoretical and historiographical approaches to the topic and selected among them for different parts of the
		authors	argument.
5.	Scientific novelty	5.1 Are the scientific results and provisions new?	There is a high level of novelty in

	principle	1) completely new; 2) partially new (25-75% are new); 3) not new (less than 25% are new)  5.2 Are the dissertation findings new?	this dissertation that comes from its combination of thorough research with an extensive array of primary sources and all the relevant secondary literature. I will also say that the author managed to make sense of difficult technical terms from 19 <sup>th</sup> century veterinary medicine and explain them clearly to the reader. This last element exceeds most other published works I've read about environmental aspects of Central Asian history.  The findings of the dissertation are
		1) completely new; 2) partially new (25-75% are new); 3) not new (less than 25% are new)	novel but align in many ways with current historiographical consensus. They enrich an interpretative field, but don't overthrow it.
		5.3 Technical, technological, economic or management decisions are new and reasonable:  1) completely new;  2) partially new (25-75% are new);  3) not new (less than 25% are new)	Yes, I believe so.
6.	The validity of the main findings	All main conclusions are/are not based on scientifically significant evidence or well-grounded (for qualitative research and areas of training in the arts and humanities)	Yes, the main findings are well grounded. They are based on robust empirical evidence and astute interpretative maneuvers. As always in the discipline of history, different interpretations are possible. But the author's contributions are of the highest standard.
7.	The main provisions for the	It is necessary to answer the following questions for each provision separately: 7.1 Is the provision proven?	All arguments of the dissertation were proven:

defense	1) proven;	1. The foundation and development
	2) rather proven;	of the veterinary service in the
	3) rather not proven;	Kazakh steppe were facilitated by
	4) not proven	epizootic outbreaks, which
		increasingly began to disturb both
	7.2 Is it trivial?	the nomadic and sedentary
	1) yes;	population of the steppe proven
	2 <u>) no</u>	2. The isolation of the veterinary
		service on livestock-driving routes
	7.3 Is it new?	and its concentration at certain points
	<u>1) yes;</u>	was reflected in the limitation of the
	2) no	work of the veterinary service in
		relation to the local nomadic
	7.4 Application level:	livestock proven
	1) narrow;	3. The late formation of a civil
	2) medium;	veterinary network, concentration on
	<u>3) wide</u>	rinderpest, and activities aimed at
		protecting the interests of the
	7.5 Is it proven in the article?	commercial and industrial sector
	<u>1) yes;</u>	established the colonial structure of
	2) no	the veterinary service in the Kazakh
		steppe proven
		4. The fight against infectious
		diseases limited the movement and
		lifestyle of the local nomadic people.
		The Kazakhs began to face more and
		more often the state administration,
		veterinarians, paramedics, new laws,
		regulations, and prohibitions
		proven
		5. The activities of veterinarians are
		seen as part of the "correct"
		colonization project, as a "tool of the

	empire." - proven
	6. Animal vaccinations became a
	practice of continuous control and
	interference in the public and private
	spaces of the Kazakh people
	proven
	7. Imperial rule viewed the Kazakh
	steppe as a potentially limitless
	source of horses for their military,
	agricultural and industrial sectors
	proven
	8. Loss of habitat and reduction of
	migration routes for Kazakhs,
	together with an increase in demand
	for livestock and livestock products,
	threatened the degradation of Kazakh
	sheep-keeping and the loss of a key
	element of culture proven
	9. Cattle has become the main
	subject of rapid and radical change in Kazakh animal husbandry, an
	important element in the qualitative
	change in herd composition, and a
	symbol of the decline of the pastoral
	economy and its well-being proven
	10. The process of qualitative change
	in the herd composition changed the
	traditional way of life of Kazakh
	livestock herders. Keeping livestock
	in stables, and new practices of land
	use, contributed to the development
	haymaking. The latter had a large
	influence not only on the deviation

8.	The principle of reliability Reliability of sources and	8.1 Choice of methodology - is justified or the methodology is described in sufficient detail  1) yes;  2) no	from the usual forms of the "pastoral" economy of the Kazakh people but also on the natural environment of the steppe, as well as on a decrease in the fertility of the soil cover. This different way of life had a different impact on the environment, changing the environment and itself in different ways, introducing changes into the stable triad of nature-man-animal in the space of the steppe. – proven  7.2 – All ten arguments are significant and are not trivial. 7.3 – All ten arguments are novel. 7.4 – It has widely applicable results. 7.5 – Yes, it is proven.  The methodology was well chosen.
	information provided	8.2 The results of the thesis were obtained using modern methods of scientific research and methods of processing and interpreting data using computer technologies:  1) yes; 2) no	N/A – this dissertation did not involve computer models
		8.3 Theoretical conclusions, models, identified relationships and patterns have been proven and confirmed by experimental research (for areas of training in pedagogical sciences, the results have been proven on the basis of a pedagogical experiment):  1) yes;	N/A – this dissertation did not involve scientific experiments

		<u>2) no</u>	
		8.4 Important statements are confirmed / partially confirmed / not confirmed by references to current and reliable scientific literature	Important statements are confirmed in by references to scholarship.
		8.5 Used literature sources are sufficient/not sufficient for a literature review	The sources in the literature are very sufficient. There is also a very new book "On Arid Land" by Jennifer Keating that might interest the student.
9	Practical value principle	9.1 The thesis has theoretical value:  1) yes; 2) no	It has important theoretical value.
		9.2 The thesis is of practical importance and there is a high probability of applying the results obtained in practice:  1) yes; 2) no	It has important practical value.
		9.3 Are the practice suggestions new? 1) completely new; 2) partially new (25-75% are new); 3) not new (less than 25% are new)	Its suggestions are partially new.
10.	The quality of writing and design	Academic writing quality:  1) high; 2) average; 3) below average; 4) low.	The level of the writing is extremely high in the English version. There were a few small typos and odd word usages (paragraph for section, pointary, etc.), but I was mostly impressed with the fluency of the writing. The required formulaic structure of the introduction made that part read less fluidly than the rest of the dissertation, but even there the prose was of a very high quality.

In reviews, official reviewers indicate one of the following solutions:

- 1) to award the degree of Doctor of Philosophy (PhD) or Doctor of Specialization;
- 2) send the thesis for revision (except for cases of thesis defense in the form of a series of articles);
- 3) refuse to award the degree of Doctor of Philosophy (PhD) or Doctor of Specialization.

Copies of the reviews of the official reviewers are handed over to the doctoral student no later than 5 (five) working days before the defense of the thesis.

NB

## **Official Reviewer:**

PhD, Associate Professor of History		
Northern Illinois University		_ Bruno, Andy
_DeKalb, IL, USA		
(place of work, academic title)	(signature)	(FULL NAME)

