The Contextualization of Hadith Regarding the Prohibition of Damaging Corpses in the Law of Autopsy

Hardivizon Hardivizon1*, Firdaus Firdaus2, Makmur Syarif3
1 Universitas Islam Negeri Mahmud Yunus Batusangkar, 2 Universitas Islam Negeri Imam Bonjol Padang
Email: 1 hardivizon@iaincurup.ac.id, 2 firdaus@uinib.ac.id, 3 makmursyarif@uinib.ac.id

*Corresponding author

Abstract: This study aims to review the hadiths regarding the prohibition of damaging corpses and contextualize them with the law of autopsy. The approach used is the hermeneutics offered by Hassan Hanafi in understanding the text of revelation as a legal source. This approach involves building three types of awareness: 1) historical awareness (asy-syu’ur at-tarikhy), 2) eidetic awareness (asy-syu’ur at-ta’ammuli), and 3) praxis awareness (asy-syu’ur al’amali). The findings of this study are as follows: 1) there are two hadiths that contain the prohibition of damaging corpses, the first narrated by Muslim, and the second by Abu Daud; 2) both hadiths that prohibit damaging corpses are of high quality (sahih); 3) the prohibition of damaging corpses applies in normal situations, but in emergencies, the use of body parts of the deceased according to necessity is allowed; 4) autopsy, whether for autopsy purposes or as a learning tool for medical students, is categorized as an emergency need and is therefore permissible according to Islamic law.

Keywords: Interpretation of hadiths; the law of autopsy; Hassan Hanafi’s hermeneutics; normal situation; emergency situation
INTRODUCTION

There were two prohibitions that were found in the treasure of hadith of Rasulullah ﷺ regarding the damaging of corpses. First, it was narrated by Imam Muslim (al-Naisaburi, n.d., p. hadith number 3261), in which the Prophet reminded his companions who went to war not to dismember the enemy’s corpses. Second, it was narrated by Abu Daud (Abu Daud, n.d., p. hadith number 2792), in which the Prophet forbade his companions to destroy the bones of a corpse found in a tomb and ordered them to be properly reburied. These two hadiths outwardly indicate the prohibition against vandalism and acts that are not appropriate for human corpses.

In this contemporary era, science and technology have progressed very rapidly, including in the medical field. Amongst the science developments in the modern medical field is post-mortem surgery. Dissecting is one of a series of post-mortem examinations known as autopsies, which are used for various purposes, such as for educational purposes (clinical autopsies) or disclosure of legal cases (forensic autopsies). Moreover, Autopsies can be used in order to seek material truth, to find out that there was a crime that resulted in the death of the victim caused by murder, assault or rape and so on (Azmi, 2021). Next, in the study of Islamic law, post-mortem examination has become a source of a complex debate. This is due to the absence of arguments in the texts of the al-Qur’an which specifically address this issue. In fact, in detail, there is a prohibition on damaging the corpse which is stated in the two hadiths of the Prophet as mentioned above. On the other hand, the need for post-mortems for certain purposes, such as for autopsy, is required. Therefore, further investigation toward the hadith regarding the prohibition of damaging corpses is of vital importance, in order to obtain the right law regarding this matter.

Large numbers of studies about post-mortem were found quite a lot. One of which has been conducted by Salma (Salma, 2021), Omar Anchassi (Anchassi, 2019), Armaya Azmi (Azmi, 2021), Bastiar et al (Bastiar et al., 2022), Muhammad Hatta (Hatta et al., 2019), Eva Solina (Solina, 2021), Abdurrahman Syayuthi (Syayuthi, 2020), and Mita Aprilia Wibawati (Wibawati, 2018) who conducted research on the law of post-mortem in Islam. In addition, there were also research conducted by Madadin Mohammed (Mohammed & Kharoshah, 2014), Fenny Bintarawati (Bintarawati & Rosyid, 2020), Ahmad Husairi (Husairi, 2016), Indra Makie (Makie, 2016), and Bebby Yesica Debora Sagai (Sagai, 2017) which reviews the theory employed by the experts in determining the permissibility of practicing post-mortems. Furthermore, there are also several studies discussing Islamic law that are confronted with medical phenomena, such as those conducted by Vardit Rispler-Chaim (Rispler-Chaim, 1993), Benny Afwadzi (Afwadzi & Alifah, 2019) and Slamet Suhartono (Suhartono, 2017).

So far, there is no any single study been found yet, especially in discussing the hadith argument that is used to determine the law of post-mortem in Islam. Textually, the hadiths said by Rasulullah ﷺ prohibited actions that can harm the body. However, according to various scholars’ opinions, the practice of post-mortem surgery, especially for the purposes of autopsies and for teaching medical students, is permissible. However, the reason as to why then these hadiths are understood contextually so as to give rise to the law of permissibility, there has not been found any particular investigation about it. Hence, due this reason, then this study has its novelty namely reading the hadiths about the prohibition on damaging corpses, with the purpose of contextualizing them on the law on post-mortem examinations.
METHOD

In this study, the authors used Hassan Hanafi’s hermeneutical approach (Hanafi, 2004, p. 22) to understand and to analyze hadith texts regarding the prohibition against damaging corpses in the legal context of post-mortem examinations. This hermeneutic approach provides a comprehensive framework for understanding and interpreting revealed texts as a source of law. First, the author uses historical awareness (as-syu’ur at-tarikhy) as proposed by Hanafi. This approach involves tracing history to ensure the authenticity and legitimacy of hadith texts related to the prohibition against damaging corpses. By understanding the historical context, authors can place these texts in the right time frame and social setting. Second, the author uses eidetic awareness (as-syu’ur at-ta’amuli) which is an important part of Hanafi’s hermeneutical approach. In the context of this study, eidetic awareness is used to understand hadith texts and their interpretations related to the prohibition against damaging corpses. The author analyzes the language expressions and asbab al-wurud (causes for the decline) of hadiths to gain a comprehensive understanding of the intent and context of these texts.

Finally, the author employs praxis awareness (as-syu’ur al-amali) of the Hanafi hermeneutic approach. According to the context of this study, praxis awareness is used to make relevant legal values contained in hadith texts regarding the prohibition of damaging corpses in the context of post-mortem examinations. The author links the teachings and values in the hadith texts with the concrete issues related to the law on post-mortems, resulting in a deeper understanding of the application of the law in those situations (Gadamer, 2004, p. 31). Moreover, by using Hassan Hanafi’s hermeneutical approach, the author is able to contextualize the hadiths regarding the prohibition against damaging corpses in post-mortem law by taking into account the historical, interpretative, and practical aspects. Thus, this approach provides a systematic and comprehensive framework for analyzing hadith texts and understanding their implications in the legal context of post-mortem examinations.

RESULT AND DISCUSSION

Hadith Historical Review Regarding Prohibition of Damaging Corpses

As mentioned earlier in the introduction part, there are two hadiths of Rasulullah ﷺ regarding the prohibition of damaging corpses:

First, it is narrated by Muslim in the book of Jihad hadith number 3261 (al-Naisaburi, n.d.) as in the following text:

\[
\text{Hadith: } \\
\text{Abu Bakr bin Abu Syaibah has told us, Waki' bin Al Jarrah from Sufyan (in another narration it is mentioned) has told us, Ishaq bin Ibrahim has told us, Yahya bin Adam has told us, Sufyan has told us, he said that, and he had already dictate us (in another narration it is mentioned) Abdullah bin Hasyim has told me utterance or lafadz which is from him. Abdurrahman bin Mahdi has told us, Sufyan from 'Alqamah bin Martsad from Sulaiman bin Buraidah from his father in which he said that} \]

Abu Bakr bin Abu Syaibah has told us, Waki’ bin Al Jarrah from Sufyan (in another narration it is mentioned) has told us, Ishaq bin Ibrahim has told us, Yahya bin Adam has told us, Sufyan has told us, he said that, and he had already dictate us (in another narration it is mentioned) Abdullah bin Hasyim has told me utterance or lafadz which is from him. Abdurrahman bin Mahdi has told us, Sufyan from 'Alqamah bin Martsad from Sulaiman bin Buraidah from his father in which he said that "When the Messenger of Allah ﷺ appointed a commander or commander of war troops, he always made a will to always fear Allah, then he said, "Fight in the name of Allah to establish in the
way of Allah, fight those who disbelieve in Allah, go fighting, and do not implement deceiving (regarding loot or spoils of war), do not break treaties, and do not mutilate corpses.

The above hadith also narrated by Abu Daud (Abu Daud, n.d., p. hadith number 2246), Tirmidzi (al-Tirmizi, n.d., p. hadith number 1328), Ibn Majah (Quzwaini, n.d., p. hadith number 2848 and 2849), Ahmad bin Hanbal (al-Syabi, n.d., p. hadith number 2592), and Darimi (ad-Darimi, n.d., p. hadith number 2332). In short, there are 7 histories in total that are related closely toward this hadith. These histories indicate that this particular hadith is well known among the hadith narrators.

Moreover, this particular hadith that is narrated by Imam Muslim can be categorized as a sahih or valid hadith since the narrators: 1) Buraidah bin Al-Hashib bin ‘Abdullah bin Al-Harits (al-‘Asqalani, 1993, pp. 1, 273), 2) Sulaiman bin Buraidah bin Al-Hashib (al-‘Asqalani, 1993, pp. 2, 392), 3) Alqamah bin Martsad (al-‘Asqalani, 1993, pp. 4, 176), 4) Sufyan bin Sa’id bin Masruq (al-‘Asqalani, 1993, pp. 2, 353), 5) Waki’ bin Al-Jarrah bin Malih (al-‘Asqalani, 1993, pp. 6, 81), dan 6) Abdullah bin Muhammad bin Abi Syaibah Ibrahim bin ‘Utman (al-‘Asqalani, 1993, pp. 3, 252) were considered as the isiqah hadith narrators by the hadith critics. Hence, their confession of receiving hadith from the previous hadith narrator can be well trusted, and the line of the sanad is interconnected to one another. No syadz or ‘illat can be found in both sanad and matan of this hadith, therefore it is eligible to be categorized as sahih.

Second, it is narrated by Abu Daud in the book of witr hadith number 2792 (Abu Daud, n.d.) as in the following text:

Al Qa’nabi has told us, Abdul Aziz bin Muhammad from Sa’d bin Sa’id has told us? From ‘Amrah binti Abdurrahman from Aisyah in which Rasullullah ☪ said that “Breaking the bones of a dead person is like breaking them when he is still alive”.

This hadith is also narrated by Ibn Majah (Quzwaini, n.d., p. hadith number 1605 and 1606) and Ahmad bin Hanbal (al-Syabi, n.d., p. hadith number 23172, 23545, 24465, 24188, and 25073).

Furthermore, there are eight lines of narration of this hadith. However, none of these narrations contradict each other in terms of meaning. This hadith which is narrated by Abu Daud is considered an authentic hadith or sahih. Because their narrators are ‘fair and dhabith’, who are proven to meet each other at every level, so that their claim to receive and narrate this hadith can be trusted. The narrators of this hadith are: 1) Aisyah binti Abi Bakar Ash-Shiddiq (al-‘Asqalani, 1993, pp. 6, 604), 2) Amrah binti ‘Abdurr Rahman bin Sa’ad bin Zurarah (al-‘Asqalani, 1993, pp. 6, 640), 3) Sa’ad bin Sa’id (al-‘Asqalani, 1993, pp. 2, 276), 4) Abdul ‘Aziz bin Muhammad bin ‘Ubad bin Abi ‘Ubad (al-‘Asqalani, 1993, pp. 3, 471), and 5) Abdullah bin Maslamah bin Qa’nab (al-‘Asqalani, 1993, pp. 3, 270).
Hadith Eidetic Review Regarding the Prohibition of Damaging Corpses

In principal, any kind of practices that can damage the human corpses other than burial are prohibited. Thus, this indicate the enormous respect of Islam toward human being for both while alive and after death as mentioned in al-Qur’an Surah Al-Isra verse 70 as follow:

وَلَقَدْ كَرَّمْنَا بَنِي آدَمَ وَحََْلْنَاهُمْ فِِ الْبََ ِ وَالْبَحْرِ وَرَزَق ْنَاهُمْ مِنَ الطَّي ِبَاتِ وَفَضَّلْنَاهُمْ عَلَىٰ كَثِيرٍ مَِِّنْ خَلَقْنَا ت َفْضِيلًَ

Verily we have honored the Children of Adam. We carry them on the land and the sea, and have made provision of good things for them, and have preferred them above many of those whom We created with a marked preferment. [al-Isrâ’/17:70]

The above verse shows that how precious is the human corpses. And this preciousness is applied for both while alive and after death. This is confirmed by two hadith by the Prophet as mentioned above.

The first hadith, as narrated by Imam Muslim, mentioned that Rasulullah ﷺ advised his companions who are going to the war to maintain their morals even in war. Among the morals are not to cheating in battle, not to violating the treaties, and not to damage the corpses of the enemy after death by dismembering them. After all, one of the most important point in these advices is the respect toward human corpses, even though it is the dead body of the infidel.

The second hadith, as narrated by Abu Daud, is derived from the event experienced by some companions of the Prophet when they accompanying the Prophet to take the corpses to the cemetery. As the arrived in the cemetery, it happened that the grave has not yet been fully dig. The group of the Prophet then decided to wait around the cemetery. Suddenly, the gravediggers found the remaining calf bone or upper arm bone in that grave hole. At first, the gravediggers decided to break the bones. However, Rasulullah ﷺ prevent them and explained that breaking the bones of the dead person is considered the same as breaking the bones of alive person. Therefore, the remaining bones found were need to be reburied in the side of the grave.

Both of the above-mentioned hadiths are emphasizing the prohibition toward damaging human corpses. The treatment toward the human corpse is similar to when the human is still alive. The point is not to do harm or not to damage the corpses. Islam is respecting the human bodies even though the person is no longer alive. The prohibition to damaging the corpse has a clear purpose, that is to show respect toward human bodies or corpses.

If reviewed further, the prohibition conveyed by Rasulullah ﷺ applies to normal conditions. The action of damaging corpses of enemies in war in the above hadith indicates that there is no emergency reason to do so. As well as destroying the bones of corpses found in cemeteries, there is nothing absolute that must be done. However, the treatment will be different if there is a precarious reason behind it. For example, when there is no food that can be eaten in a situation where someone is lost in the wilderness, to make a living he can eat parts of the bodies of human corpses that is available in front of him.

Hadith Practical Review Regarding the Prohibition of Damaging Corpses

Ulama agree that Muslim corpses must be treated with special care, from the initial washing until the burial process; everything must be carried out in accordance with certain procedures that have been regulated by the sharia. As for the treatment of the corpses of infidels, the following are the opinions of the Ulama (AM, 2016). According to the ulama mazhab of Hanafiyah, Mâlikiyah, Syâfi'iyyah, Hambaliyah and Zhâhiriyah, they all agree
that if a dhimmi infidel dies in the midst of the Muslims, while in that place there are no other dhimmi infidels who take care of his body, then it is the Muslims who are responsible to bury him just like he was treated well in his lifetime. In line with that madzhab of Hanafiyah added that even though he was buried, he will not be treated like a Muslim corpse; that is, it will not be shrouded and no hole burrow will be made, the corpse will only be put in the grave (Husairi, 2016).

Moreover, as for the treatment of the corpses of infidels harbi and apostates, the mazhab of Syafi’iyah states that it is not obligatory for Muslims to bury their corpses. However, Muslim may of course bury them with the aim that the Muslims are not disturbed by the stench of their corpses. Moreover, the other mazhab such as Hanafiyah, Malikiyah, Hambaliyah and Zhâhiriyah; their opinion remains the same in terms of the treatment of the corpses of infidel harbi or apostates, as is their opinion in the treatment of the corpses of infidel dhimmi. (Gontor, 2019).

Generally, the purpose of Islamic law is dar’u al-mafaasid wa jalbu al-mashaalih, namely it is to prevent damage or to reject harm and to bring benefit to mankind. Abu Ishaq As-Sathibi mentioned that there are 5 objectives of Islamic law, namely maintaining the purity of religion, soul, mind, lineage and property (Asy-Sya’rawi, 2007, p. 435). Supposedly, all developments in science and technology, specifically in the field of medicine are in accordance with the objectives of Islamic law itself.

The discovery of new science and technology should not conflict with Islamic law, but instead provide benefits to mankind. For example, is carrying out a forensic autopsy justified in Islam. In the studies of contemporary Islamic law, there are several problems in the field of health sciences, including the issue of an autopsy being a legal issue that requires ijtihad from Islamic law experts. In Islam, all contemporary issues must be adapted to the demands of Islamic law, namely al-Qur’an and al-hadith. However, if the al-Qur’an and al-hadith have no answers to these problems, then ijtihad can be used as a legal basis to solve human problems (Wibawati, 2018, pp. 15–16).

Overall, Islam takes great care of the gifts that have been created or bestowed by mankind. If someone commits an act by damaging or disrespecting the deceased, Islam forbids this action. Sya’rawi mentioned that in general, autopsies are prohibited in Islam (Asy-Sya’rawi, 2007, p. 458). Based on the two hadiths narrated by Muslim and Abu Daud mentioned above, humans are prohibited from damaging, humiliating, hurting or disrespecting a dead body, because these actions hurt the corpse as if the corpse were still alive in the world. In addition, carrying out clinical and forensic autopsies in essence has violated the honor of a lifeless body, such as cutting, slashing, or breaking its bones according to the authentic hadith above. In line with that, a similar view was also expressed by Sheikh Taqiyyuddin An-Nabhani, Sheikh Bukhait Al-Muthi’i and Hasan As-Saqaf in which according to them performing autopsies of various types and methods is prohibited and forbidden in Islam. However, the prohibition of carrying out an autopsy only applies to Muslim corpses, but for non-Muslim corpses, they are permitted (Bakry, 2003, p. 135). Moreover, Yasid stated that for the purposes of law enforcement and upholding justice, an autopsy may be performed (Yasid, 2005, p. 203). Next, M. Mutawalli Asy Sya’rawi revealed that the law of autopsy (dissecting) a corpse is not prohibited, especially if the autopsy is intended to find something or to show something (Asy-Sya’rawi, 2007, p. 453).

The Grand Ulama Council in Saudi Arabia has discussed this matter in their ninth congress in 1396 H / 1976 M. The meeting resulted in the following decisions: 1) for the purposes of an autopsy, both forensic autopsy and clinical autopsy, the Grand Ulama
Council decided that dissecting corpses for these purposes are permissible since forensic autopsies aim to enforce criminal law so as to create security in society. As for the medical autopsy aims to protect society from epidemic diseases, and 2) these two benefits are greater than the mafsadat of dissecting corpses. In conclusion, post-mortem examination for this purpose is permissible even if the corpse is that of a Muslim or an infidel ma'shûm (which is protected by Islamic law, such as infidel dhimmi) (Ichsan, 2020).

As for the second type of post-mortem, namely for study. In this case the assembly were considering several things, including (Syayuthi, 2020): 1) that Islamic law came with the aim of bringing benefits and maximizing it; and rejecting mafsadat and minimizing it, 2) post-mortem examination for medical study has great benefits, as is well known in regard to the advances in medical science, 3) there is no animal that can replace the human body to meet the needs of this learning, 4) Islamic sharia respecting the glory of Muslim bodies, both when they are still alive and when they are dead. In contrast, the post-mortem process certainly treats the body not according to its honor, and 5) there is no urgency of dissecting the corpses of Muslims since it is possible to obtain the bodies of infidels who are not ma'shûm.

With the above considerations, the assembly decided that it was not permissible to dissect the corpses of Muslims or infidels who are ma'šūm for the study of medicine. It is sufficient that the corpses of non-ma'šūm infidels are used, such as harbi infidels or apostates or non-Muslim corpses. In line with the opinion of this assembly, Sheikh Abdul-Aziz bin Baz also issued the same fatwa regarding the law on post-mortem examinations for the purpose of studying medical science. He only allows dissection of infidel harbi corpses and apostate corpses (Solina, 2021). However, what is very important for doctors or other post-mortem practitioners to pay attention to is the basis for the permissibility of dissecting corpses due to urgent circumstances. Therefore, if one day this need has been fulfilled, then it should be returned to the original law that the entire human body may not be dissected or dismember (Al-Syinquithi, n.d., p. 112). Likewise, this rule should be applied in autopsying the body of a Muslim; if the cause of the death can be found easily without having to do an autopsy, or if it is only requiring minor surgery, then surgery may not exceed what is actually needed.

The decision of the Grand Ulama Council of Saudi Arabia contains several reasons that strengthen the benefit of allowing corpses to be dissected. Among these reasons are the following (Azmi, 2021): 1) it is permissible to dissect a pregnant woman’s corpse to remove a fetus that is likely to live. Indeed, this issue has been debated by Ulama before, but, in our opinion, the strongest opinion is that it is permissible, and 2) it is permissible to eat human corpses in a state of urgent hunger. In Raudhatuth-Thâlibin it is stated that, “If a person is hungry while he does not get food except for the corpse of a ma’šūm person, then it is lawful for him to eat the corpse - although it is permissible, but only eat it to make a living (not until he is full) – however, the flesh of the corpse cannot be cooked or grilled, it must be eaten raw. Because, being eaten that way is enough to sustain life …” (Hatta et al., 2019).

As for the prohibition on mutilating corpses mentioned in the hadith above, it turns out that there are times when it is permissible if it is really necessary. Like the punishment that Rasûlullâh ﷺ imposed on the Uraniyyin people, their hands and feet were cut off, their eyes were stabbed until they were blind and left to die on the rock of the city of Medina (HR Muslim, number 1671).[4] However, it is prohibited to mutilate corpses if only for fun not for an urgent need, such as cutting ears for key chains and so on. Whereas in this case, surgery is done for a great benefit (Siregar, 2015).
In several fiqh rules it is stated that something that is prohibited in Islamic law can be justified if there is an emergency situation. Moreover, there are several fiqh principles that can be employed as a basis for conducting an autopsy, such as (Al-Syinqithi, n.d., p. 170):

"Emergency situations (critical) allow things that are prohibited"

إذا تعارض مسيسناً وعمّ أعظمهما ضرراً فإليك أخفهما

“In a situation in which there two conflicting damages or hazards, then the greater damage or bigger danger is avoided by carrying out actions with a smaller risk of danger”

الضرور الأشد يُزال بالضرر الأخف

“heavier damage is removed by implementing lighter damage”

Thus, an autopsy can be carried out for emergency purposes according to the degree of need or importance. In addition, numbers of contemporary ulama such as Sheikh Hasanain Makluf, Sheikh Sa’id Ramadhan Al-Buthi and several Islamic fatwa institutions such as the fatwa Majma’ Fiqh Islami (Organization of the Islamic Conference), Hai’ah Kibar Ulama (Saudi Arabia) and Fatwa Lajnah Da’imah (Saudi Arabia) allows autopsies with the aim of creating benefits in the fields of security, justice, and health (Al-Hazmi, 1978, p. 90).

Based on the Fatwa of the Indonesian Ulama Council Number 12 of 2007 concerning the use of corpses for research purposes, it is stated that this is permissible on condition that the research is intended to be useful for scientific development, bringing greater benefit, namely providing soul protection (hifdz al-nafs), not just for practical purposes only, as for media research can only be done with human media. Likewise, the MUI Fatwa Number 6 of 2009 concerning Autopsies of Bodies states that all types of autopsies are prohibited or forbidden in Islam, but in emergency or urgent conditions, autopsies are permitted (Gibtiah, 2016, p. 166). Moreover, opinions that allow autopsies base their argument on benefit (mashalih mursalah). However, Imam Taqiyyuddin An-Nabhani considered that the mashalih mursalah rule cannot be used as a syar’i argument in determining a punishment for a community problem (Afwadzi & Alifah, 2019). Furthermore, mashallah mursalah in the science of Ushul Fiqh is not a valid syar’i proposition, nor is it referred to as a syar’i proposition that is mukhtalaf fiihi. However, according to most of ulama or jumhur ulama, the sources of Islamic law which are strong and not disputed by ulama (muttafaq ‘alaihi) are the Al-Quran, As-Sunnah, Al-Ijma’ and Al-Qiyas.

CONCLUSION

This study found two hadiths related to the prohibition against damaging corpses; the first was narrated by Imam Muslim with authentic hadith quality, and the second was narrated by Abu Daud with authentic quality as well. These two hadiths indicate the prohibition against damaging corpses, both in war and peace situations. The goal is to respect the human body, because the treatment of the human body after death must be the same as when it was still alive. However, this prohibition does not apply in emergency situations.

Post-mortem examinations for the purposes of autopsies for both by the police and for learning media for medical students are permitted. This is not considered as an act of damaging the corpse, because it is an emergency. In addition, investigations in cases in which only an autopsy can reveal the truth or learning for medical students are categorized
as emergencies. Therefore, the permissibility of post-mortem does not conflict with the prohibition against damaging the corpse ordered by the Prophet as mentioned in his hadith.

REFERENCES


