The \textit{danda} or \textit{bala} (army) is one of the seven essential elements of a ‘state’, according to the Indian writers on statecraft. The army of a state should be equipped with arms and armours. The term ‘arm’ generally implies the weapons both defence an offence. It also implies the whole machinery of warfare. On the other hand, the term ‘armour’ (āvaraṇa) implies defensive and protective shields, helmets, greaves etc. So, the arms and armours are the essential devices for protecting and strengthening a ‘state’.

If we look back to the history of the development of weapons it must be admitted that the weapons of chase were developed by the premitive people as means of their sustenance. War weapons were also developed gradually. Thus, the history of the development of arms and armour goes to the remotest antiquity. It is proved from the findings of weapons of war and chase in the excavation sites at Mahenjodaro and Harappa. Most of the weapons found there were made of bronze or copper and those were axes, spears, daggers, bows, arrows, maces, slings and catapults. But no protective armours like shields, helmets or greaves are found.
The Indian authorities on statecraft mention about various kinds of weapons of warfare. The great epics like *Mahābhārata* and *Rāmāyaṇa* as well as the *Arthaśāstra* mention about various kinds of war weapons and armours. Among the later literature, *Nītprakāśikā* of Vaiśampāyana, *Śiśupālavadha* of Mahākavi Māgha, *Kumārasambhava* of Kālidāsa, *Bhaṭṭikāvya* of Bhartṛhari are noteworthy.

It may be noted here that, it is not feasible, nor desirable, for obvious reasons, to make a comparison between the modern weapons of war with those of the ancient world, as mentioned in the above named texts in respect of size and shape, as well as on technology and structure. The only purpose in this regard is to put forth the activities and the powers of weapons, which have been stated therein.

Kautilya, in the *Arthaśāstra* referred to war machineries (*yantra*), both for defensive and offensive purposes, weapons and armours. He is of the opinion that the Superintendent of the armoury\(^1\) should be responsible for making those armours.

Kautilya classified the equipments of war into three groups, \(viz.,\) (a) *yantras* i.e. machines, (b) *āyudhas*, i.e. weapons and (c) *āvaraṇa*, i.e. armours.\(^2\)

1. *Āś. II.18.1-4.*
2. *ibid....yantramāyudhamāvaraṇamupakaraṇam.....*
Against this classification of Kautilya, the Agnipurāṇa classifies them into five categories, viz., yantramukta, pānimukta, mukta sandhārata (thrown and drawn back), amukta and muṣṭi. Mahābhārata mentions only four and Māgha also refers to the fourfold division of weapons. Māgha refers to muṣṭiyuddha, too.

The yantra is further divided by Kautilya, into two broad groups viz., immovable (sthitayantrāṇi) and movable (calayantrāṇi). The Arthasastra refers to twenty-six types of machines out of which ten are immovable and sixteen are movable. The immovable machines are as follows: (i) sarvatobhadra (a small cart capable of hurling stones on all sides), (ii) jāmadagnya (a large machine to shoot arrows), (iii) bahumukha (one with archers), (iv) viśvāsaghātin (a cross beam at the gateway so placed as to make it fall when the enemy enters), (v) sarīghāṭi (a long pole to set fire to the fort), (vi) yānaka (a rod mounted on a wheel to be hurled against enemies), (vii) parjanyaka (a water machine to put out fire), (viii) bāhū (two pillars placed opposite each other to be pulled down when enemies enter), (ix) ardhabāhū (pillar measuring half of the

3. cf. yātaṁścāturvidhyamastrādibhedādavyāsangaiḥ sauṣṭhavāllāghavaṇcā // -Śiśu, XVIII. 11.
4. rośaveśadābhimukhyena kaucitpānigrāham rāṁhasaivopayātau / hitvā hetirmattavāmuṣṭighātaṁ ghnantau bāhūbāhavi vyāsrjetāṁ // -ibid, 12.
5. As. II. 18. 5-6.
above), and (x) urdhābāhu (a single pillar, fifty hastas long, slaying by release of mechanism).  

The following sixteen machines, mentioned by Kautilya, are movable machines:

(i) pāncālika (a wooden beam with sharp points outside the fort wall), (ii) devadāṇḍa (a pole with nails), (iii) sūkarikā (a leather wall to protect the roads, towns etc. against stones thrown by enemies), (iv) mūsalayaśṭi (a pointed rod of khadira), (v) hastivāraka (a rod with two or three points to prevent elephants from resting on), (vi) tālavṛnta (a form like that of disc), (vii) hammer, (viii) mace, (ix) spṛktaḷā (a rod with sharp points on its surface), (x) spade, (xi) āśphāṭina (a leather bag with a rod), (xii) utpāṭima, (xiii) udghāṭima (a machine to pull down towers etc.), (xiv) śataghni, (xv) trīśula (a trident), and (xvi) cakra (discuss).

Out of the above twenty six machines only five are mentioned by Vaisampāyana. Those are: muṣala, mudgara, cakra, gadā and śataghni.

Kautilya does not speak about the exact nature and purpose of the above mentioned immovable machines. It may be presumed

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6. sarvatabhadrajāmadagnyabahuḥumukhiṣvāsaghāṭisarṇghāṭīyānakapar-
janyakabāhūrdhvābāhūrdhabāhūni sthitayantarāṇi // -ibid. 18. 5.

7. pāncālikadevadanḍaśūkarikāmusalayaṣṭhastivārakatālavṛnta-
mudgargarādasprκṭarākuddālāśphāṭimotpāṭimoddhāṭimāśataghniṣūla-
cakrāṇi calayantrāṇi // -ibid. 18. 6.
as immovable.

Kauṭilya mentions the names of weapons like śakti, prāsa, kunta, hāṭaka, bhiṅḍipāla, śūla, tomara, varāhakarṇa, karpaṇa, kaṇaya, trāsikā and others with piercing points. He stated about bow and bow-strings and arrows. According to him, made from tāla, cāpa, wood and horn and known as kārmuka, koḍaṇḍa and drūṇa are the bows. mūrvā, arka, śaṇa, gavedhu, veṇu and sinews of animals are bow-strings. beṇu, śara, śalākā, daṇḍāsana and nārāca are arrows. paraśu, kuthāra, paṭṭasa, khanitra, spade, saw, and kāṇḍacchedana, according to Kauṭilya, are razor-type weapons. There are weapons of stones also, and these stones are used for throwing to the enemies from the machines.

Here are some weapons mentioned by Kauṭilya in his Arthasastra.

i. śakti: śakti is identified with the spear. It is defined as a weapon provided with edges like a plough share. It is a very powerful weapon. Kālidāsa mentions śakti in his Kumārasambhava and describes how finally śakti used by Kumāra killed the

8. śaktiprāsakuntahāṭakabhiṅḍipālasūlātomaravaraḥakarṇakaṇa- yakarpānātrāśikādīni ca hulamukhāni // -ibid. 18. 7.
9. tālacāpāpadarāvasārāṅgāṇi kārmukakodaṇḍadrūṇā dhanūṅgśi // mūrvārkaśāṇagavedhuvēṇusnayūti jyāḥ // veṇuśarasalākādaṇḍāsanarācāśca iṣvāḥ // -ibid. 18.8-10.
great Asura. Tāraka by name, in the war between gods and the demons. Magha in his Śiśupālavadhā refers to sakti.

ii. prāsa: The prāsa appears to have been another weapon belonging to the generic class of spears. In the Arthaśāstra it is depicted as similar to sakti, as a weapon with edge like a ploughshare.

iii. kunta: kunta also belonged to the class of spears, and Kautilya defines it as a weapon with edge like a ploughshare. It is a weapon for horse-riders.

iv. hāṭaka: hāṭaka is similar to kunta and it also belongs to the class of spears and javelins.

(v) Bhīṇḍipāla - In the Arthaśāstra Kautilya mentions it along with sakti, prāsa, tomara etc. and defines it as a weapon with edges like a ploughshare.

(vi) Śula - It is like the javelin sharp edged single point weapon, length not fixed, as the commentator of Kautilya says.

(vii) Tomara - The tomara was, in all probability, a javelin. In the Arthaśāstra it is defined as similar to sakti and the kunta, a weapon with edges like a ploughshare.

(viii) Varāhakarna - The varāhakarna is same as prāsa. tomara with tip shaped like a boar’s ear.

12. skhalanti na kvacitaikṣanyādabhyagrapaḥasaṁśini // amoci saktiḥ saktikairlohaṁ na šarirajā // -Śiśu. XIX. 59.
(ix) **Karpana** - The karpaṇa is another weapon used in war. It is like an arrow of the size of *tomara*.

(x) **Kaṇaya** - Kauṭilya’s commentator says that it is all-metal, with tridents at each end and a grip in the middle.

(xi) **Trāśikā** - *trāśikā* is a war weapon made of all metal, of the size of *prāsa*, with a tuft at one end.

(xii) **Bow, Bow-strings** - are weapons of war which play an important role. Throughout the ancient period, it was the weapon par excellence of the warriors. After its name the military science is termed as *dhanurveda*. Proficiency in its use was the measure of a man’s reputation as a warrior. In the *Arthaśāstra* Kauṭilya specifies *tāla* (palmyra), *cāpa* (bamboo), *dāru* (wood), and *śrīga* (horn) as the main materials out of which bows in his age were made. Bows made of *tāla* were known as *kārmuka*, those of bamboo as *kodāṇḍa*, those of wood as *dṛṇa*, while horn bows were called *dhnau*. According to him bowstrings were made of *mūrvā*, *araka*, *śāṇa*, *gavedhu*, *vēṇu* and *snāyu*. Their tips for cutting, piercing and striking are made of iron, bone or wood. Occasionally, it may be found that arrows had ignited

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13. *Aś. II. 18. 8.*
14. *ibid. II. 18. 9-11.*
matter wrapped round the point. Kautilya gives three different recipes for the preparation of fire-arrows. These three recipes are, the powder of *priyāla*, the soot of *avalguja*, wax and the dung of horses, donkeys, camels and bullocks which make fire-mixture. An arrow smeared with it and covered with hemp and the bark of *trapusa* is a means of setting fire. *venu, śara, śalākā, daṇḍāsana* and *nārāca* are arrows as stated by Kautilya. From the writings of Kālidāsa we may get an idea how does an arrow work in the war field also. In the *Kumārasambhava* he writes that the arrows discharged by the skilled warriors who were angry, seemed to hurt forth blazing meteors like terrific serpents, pervading the sky. In another śloka he described that the arrows discharged by archers from bow, down back to the ends of their, dropped down to a great distance, ran as if thirsty for blood of the fighters.

In the *Arthaśāstra* there is mention of the sword. Three distinct varieties of swords are stated therein, *viz., nistriṁśa* (provided with

17. *ibid*. II. 18. 10.
a crooked end), *maṇḍalāgra* (provided with a circular head), and *asiyasti* (shaped like a staff). The materials for the construction of the *hilt* are specified in *Arthasastra* as the horn of rhinoceros, buffalo, the tusk of the elephant, wood and bamboo-root.

Now, let us see how Māgha classifies the weapons of war along with their uses.

It is to be mentioned here that Māgha describes the march of Kṛṣṇa towards Indraprastha to attend the Rājasūya sacrifice to be performed by Yudhiṣṭhira. He was accompanied by other Yādava heroes also, because of the fact that Kṛṣṇa might have to face the aggressive Śiśupāla in the sacrificial ground itself. So, Kṛṣṇa was advised by Uddhava to proceed to Indraprastha with full preparation of war. As Kṛṣṇa was ready for march, His arms and armours approached Him. A description of the arms and armours of Kṛṣṇa and other yādava heroes may be noticed in the *Śiśupālavadha* from canto XVII onwards.

Māgha classified the arms and weapons into two categories: *mukta* and *amukta*. He stated that, exhibiting the ability of knowledge, the weaponed heroes began to strike with repeated blows by *mukta* and *amukta* weapons which are made of four

20. *nistrimsamandalagrasiyastayab khangah* // -As. II.18.12.
different types of weapons like astra etc. \((\text{astra})\), and whose despatch and dash could not be obstructed due to their quality of speed and force.\(^{22}\) It is noteworthy that the poet mentions four types of weapons \((\text{caturvidhyamastradi})\) which mean the astra, apāstra, vyastra and mahāstra. For example, dhanuṣ is the astra; it's external area is the apāstra; it's length, breadth are vyastra; and āgneya, vāyavya, gāruḍa etc. which are supposed to be arrows are called mahāstra. The astra is also called muktāstra. It shows that Māgha does not maintain any distinction between astra and sastra, i.e. thrown and non-thrown. The weapons which can be thrown are astra. On the other hand, weapons which can be used by holding in hands are called amuktāstra. Any object which is thrown at a target with the aim of hitting is a kind of missile. So, arstra are missiles; ṛṣṇa, nāga, cakra etc. belong to this category.

There are some astras which were discharged by the operation of mantra and these are very powerful. All these weapons are called mantramukta and are considered very sacred weapons. 

\(\text{sastra}\) is called amuktāstra, i.e., these are not thrown. These weapons are for hand to hand fighting, and by means of these one warrior can attack one foe only at a time. Gadā, khaḍga, kṛpāṇa,

\(^{22}\) cf. \(\text{yatāiscaturvidhyamastrādibhedādavyāśaṅgaiḥ sauṣṭhavāllāghavāccā/sīkṣāśaktim prāharandarśayanto muktāmuktairāyudhairāyudhiyāḥ}/
\(-Śiśu. \text{XVIII. 11.}\)
karwāla, bhalla, prāsa etc. come under this sastra group.

Now, here is the list of the weapons that have been mentioned by Māgha in the Śiśupālavadaḥ. The weapons used by Kṛṣṇa are:

(i) cakra, called Sudarśana by name
(ii) gada, called Kaumudakī by name
(iii) khaḍga, called Nandaka by name
(iv) dhanuṣ, called Sāranga by name
(v) śālikha, called Pañcājanya by name

Kṛṣṇa also used the chariot, called Puṣya by name, with the dhvaja i.e. banner. A brief description of Kṛṣṇa’s chariot is furnished in the verses 22 and 23 canto III.²³

A brief discussion on these weapons of Kṛṣṇa is made in the following paragraphs:

Cakra:

The cakra attributed to Viśu is of two different forms as is seen in the sculptured images. The Rgveda (VIII. 96. 9) describes the cakra as a weapon of Indra. There are spokes in the cakra and these are like the wheels of an ordinary car, while those of the other form resemble the petals of a lotus.

²³. rarāja sampādakamīṣṭasiddhe sarvāsu dikṣapratīṣṭhiddhamārgam/ mahārathah puṣyaratham rathāṅgi kṣipraṁ kṣapānātha ivādhirūddhaḥ// dhvajāgradhmā dadṛṣe’thā saureḥ saṅkrāntamūrtiramaṇīmediniṣu/ phanāvatastrāsavitūṁ rasāyāstalāṁ vivakṣānivipaṇnagāriḥ//
   -ibid. III. 22.23.
The Matsyapurāṇa (ch. 150) describes it as a wheel with eight spokes. The Vāmanapurāṇa (ch. 56) holds that there are various types of cakra. Its outer edge is very sharp, and that is the cutting edge, sometimes this edge is provided with some sharp teeth. In certain cases teeths are curved. The Mahābhārata describes it as a brilliantly shining weapon—sometimes it dazzles so much that it becomes impossible to look at it.²⁴ It is said that this cakra was given to Viṣṇu by Lord Śiva after being made out of the energies of the gods and, therefore, radiant with luster and irresistible to the enemies.

In the Śiśupālavadha, we find, that the cakra, Sudarsaṇa, used by Kṛṣṇa, was the most powerful weapon, which had its peculiar manoeuvres or circles (maṇḍala).²⁵ This weapon separated the head of Śiśupāla from his body, i.e. it cut off his head and thus made an end of a tyrant.²⁶ Māgha speaks of the

²⁴ In Mahābhārata it is mentioned in ādiparva (Chap. 19, 23, 32, 207, 227) sabhāparva (chap. 44), vana parva (chap. 14, 15, 22), bhīśmaparva (chap. 59, 66, 107) droṇa parva (chap. 25, 30, 48, 49, 148, 156, 176, 179, 180), karna parva (chap. 36, 47, 48, 59, 92), sauptika parva (chap. 12).

²⁵ tasyātāsīnasamānabhaso bhrāmyanmayaihāvalimaṇḍalenā / cakreṇa reje yamunājalaudhah sphuranmahāvarta ibaikabāhūḥ / rāhuṣtriṣṭanayorāḥ sahasā yenāślathāilingana // -Śiśu. III. 17.

²⁶ rāhuṣtriṣṭanayorāḥ sahasā yenāślathāilingana - vyāpāraikavindadurlalitayoh kārkaśyalaksīmīrthā / tenākroṣata eva tasya muraṇjīrāklāloḷāmala - jvālāpallavitena mūrdhavikalāṁ cakreṇa cakre vapuh //

-Śiśu. XX. 78.
cakra as a weapon which is hurled from a distance and cuts off some limb of the enemy as intended by the thrower.\textsuperscript{27}

Gaḍā :

It is a heavy rod of iron with one hundred spikes at the top. According to the sculptured figure, the gaḍā is the wooden mace or heavy staff with a stout heavy top tapering invertedly towards the bottom. It’s principal use was to strike the opponent either from a raised place or from both sides, and strike terror in the enemy camp, especially of the gomūtra array. In the Śiśupālavādha, we have a description of Kau-modakī-gaḍā used by Kṛṣṇa. This gaḍā is capable of destroying the body of an enemy and it ‘remains far away from the word unsuccessful’ and always stays in the hand of Kṛṣṇa with its mighty powers.\textsuperscript{28}

Khadga :

The khadga generally bears the character of a sword. It was commonly worn hanging on the left side and was associated with thirty-two different movements. As the khadga bears the character of a sword, the use of it consisted in rending, cutting,

\textsuperscript{27} ibid. XVIII. 45.

\textsuperscript{28} virodhīnāṁ vigrahaḥ bhedadakṣaṁ mūrteva śaktiḥ kvacidaskhalanti / nityatāṁ hareḥ sannihitā nīkāmatā kaumodakī modaṁyaṁ sma cetāḥ //

-ibid. III. 18.
lopping and striking the enemy. The *khadga* of Kṛṣṇa was named Nandaka; and this was a very powerful weapon to create terror emotion in the mind of the enemy.²⁹

**Dhanuṣ :**

There is no need to emphasise the fact that archery played an important role in battles in ancient world. The bow had a continuous history in India till the beginning of the nineteenth century. Throughout the ancient period, it may be said, the *dhanu* was the weapon par excellence for the warriors. Proficiency in its use was the measure of a man’s reputation as a warrior. Kṛṣṇa’s bow is made of buffalo’s horn and, therefore, was called Śāraṅga; and it never shows politeness at the time of the discharge of arrows. The submissive attitude is quite absent in Śāraṅga-*dhanu*, specially in front of the enemies.³⁰

**Śaṅkha :**

Each and every Commandar (*senāpati*) or the *rathī* had his own bugle in ancient India. Most of these bugles are made of

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²⁹. *na kevalaṁ yāḥ svatyaṁ murārerananyasādhāraṇatāṁ dadhānaḥ/* 
*atyarthamudvejayita pareṣāṁ nāmnāpi tasyaiva sa nandako’abhūt/*
* -ibid. III. 19.

³⁰. *na nītamanyena nātiṁ kadācitkarnāntikaprāptauṇāṅkṛtyaṁ/ *
*vidheyamasyābhavadantikastham śāraṁgāṁ dhanurmitramīva drāḍhyāḥ/*
* -ibid. III. 20.
conch shells and, hence, called śaṅkha. The śaṅkha of Yudhiṣṭhira, Bhīmsena, Arjuna, Nakula and Sahadeva were known as Anantavījayya, Pauṇḍra, Devadutta, Sughoṣa and Maṇipuṣpaka, respectively. Kṛṣṇa’s śaṅkha is known as Paṇcajanya. The name pāṇcajanya is related to the asura, called Paṇcajana. In the Śiśupālavadhā, Māgha compared the sound and volume of Paṇcajanya with that of the loud noise created by the clouds, and it’s beauty with that of a swan. By blowing a śaṅkha in the battle-field, the rathī used to inspire himself as well as his own army, and also invite the opponent(s) to fight.

Over and above these weapons, Māgha mentions spears (śakti) in his Śiśupālavadhā. The usual term for the spear in the epic and post-epic literature is śakti. Māgha uses the term śakti for spears and describes it as made of iron (loha) and provided with a sharp blade at the end. Māgha mentioned the use of sword (asilatā), dhanu, golden arrow (suvarṇapuṃkhai,
kāñcanaśachāyāśara)\textsuperscript{36}. arrow's tūṇi\textsuperscript{37} etc.

Thus, from the above discussion it appears that both Kauṭilya and Māgha have classified arms and weapons under different heads. In the Arthaśāstra Kauṭilya divided arms as engines of war and weapons with pointed end like plough shares, bows, swords, razor-bladed weapons, stones as armours.

In the Śiśupālavadha, it is found that Māgha is aware of both the mukta and amukta, i.e., thrown and non-thrown weapons. and in this respect, the influence of the Nītiprakāśikā seems to be much more in Māgha’s writing. However, it appears that Kauṭilya and Māgha, in their writings, tried to establish the fact that there were two kinds of weapons as there were two types of fighting, viz., offensive and defensive. An offensive weapon, as it can be said, is an arm which lengthens the reach of a warrior, something with which he hopes to strike from a longer distance than that from which he can be struck. All the weapons, so far we have mentioned, come under the offensive weapons and it appears that Kauṭilya as well as Māgha were much aware of the offensive weapons used in war.

Armours (āvarana):

Both Kauṭilya and Māgha were very much aware of defensive

\textsuperscript{36} ibid. XVIII. 55, XIX. 11.
\textsuperscript{37} ibid. XIX. 39.
arms also. While weapons are used mainly for offensive purposes, armours are defensive tools or implements for the protection of the person of the warrior. Warriors generally use protective garments like body armour and shields. The defensive arms may be considered under two main heads, viz., shield and body-armour.

The usual terms for the shield in Sanskrit are āvaraṇa, carma, phalaka, etc.; and for the body armours are varman, kavaca, sanāha, tanutrāṇa, sirastrāṇa, etc.

In the Arthaśāstra, Kauṭilya uses the term āvaraṇa in the generic sense of shields and varman for different kinds of body-armour. It has been stated that petī (box), carma (leather-shield), hastikarna (elephant’s ear), tālamūla (a kind of shield), dhamanikā (bladder), kapāṭa (door-wing), kitikā (light shield), apratihata (irresistible) and balāhakānta (cloud-edged) are the instruments used for self-defence (āvaraṇam).38 It is to be noted that in the age of Kauṭilya shields were made of a variety of materials, such as creepers, bamboo, wood and leather. Shields should protect the body, and be firm, light and tough. Several varieties of armour, made of horns, skins and also of iron, are mentioned in the Arthaśāstra itself. The animals whose skins were used for this purpose were

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38. peticarmahasti-karṇatālamūlādhamanikākapāṭakitikāpratiha-tabalāhakāntasćāvaraṇāni. -Āṣ. II. 18. 17.
tortoise, rhinoceros, bison, elephant and cow. The four important varieties of armour, all of iron according to the commentators of the *Arthasastra*, were, in the first place, a coat of mail to cover the body from head to foot including the two hands; secondly, a coat of mail of two separate plates covering the head, hump and arms, and thirdly, a kind of armour to be worn as a loin-cloth. Other varieties of armour used merely for protecting the body were śīrastraṇa or headgear for the protection of the head, kaṇṭhatraṇa for protection of the neck, kurpāsā or a covering for the trunk, kaṅcuka or a jacket covering up to the knee joints, vāravaṇa or a jacket extending to the heels, paṭṭa or an upper garment, and nāgodarika or gloves to protect the fingers.

Kauṭilya, in the *Arthasastra* describes the materials out of which the different kinds of body armour, as known to his age, were fabricated. Iron net (*loha-jāla*), little iron net (*loha-jālika*), iron-plate garment (*loha-paṭṭa*), iron-armour (*kavaca*), sūtraka and a contrivance of skin, hoof and horn of dolphin, rhinoceros, dhenuka, elephant and bull are protective clothing.

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39. *loha:jālika*paṭṭakavacasūtrakantaśiśumārakakhaṅgidhenuka-
   hastigocarmakhuraśṛṅgasarāṅghātam varmānī. -ibid. II. 18. 16.
40. Commentry by Ganapati Sastri.
41. śīrastraṇakaṇṭhatraṇakūrpaśakāṅcukavāravaṇapaṭṭanāgodarikāḥ //
   -As. II. 18. 17.
42. *ibid.* II.18.16.
Māgha in his Śiśupālavadha mentions armours used by soldiers both of Śiśupāla and Kṛṣṇa. Kauṭilya also mentions and hold discussions about such armours. Māgha mentions *kaṅkaṭe*, i.e. *kavaca*. The shield was made of *carmā* (*carmaphalaka*) provided with a handle, which is held fast in grip of hands (*maṇḍukāśiṣṭamuṣṭe*). In the Śiśupālavadha, description of *kavaca* made of iron is found. Those *kavaca* were very heavy and a person of weak constitution can hardly carry it.

It is to be noted that in the Śiśupālavadha, Māgha repeatedly mentions about armoury. The dark or dusky-coloured iron armour is referred to in the Śiśupālavadha by the great poet. In XVIII. 20 of the *mahākāvyya*, the description of the sharp swords of the enemies, shining like lightning when the *kavaca* made of iron of enemies cut, is found. He describes in one place that those soldiers who wore iron armour, i.e. *kavaca*, began to throw the arrows, as if it were *vajra* itself shining like gold, into the person of Pradyumna, the son of Lord Kṛṣṇa.

Māgha describes very nicely in certain verses like 21, 22 etc.

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43. \textit{nīte bhedam dihauta dhārābhīghātadambodābhe śātravenāparasya/}
\textit{sāsṛgṛajistiksnamārgasya mārgo vidyuddiptaḥ kaṅkaṭe lakṣyate sma ///}
44. \textit{āmūlāntāśayakenāyatena syūte bāhau maṇḍukāśiṣṭamuṣṭeḥ/}
\textit{prāpyāṁsahyāṁ vedanāmastadhairyādapyabhṛṣyaccaḥarma nānyasya/}
\textit{pāneḥ /// -Śiṣu : XVIII : 21}
45. \textit{dadhanairghanasādṛṣyāṁ lasadāyasadaśaśanaṁ/}
\textit{tatra kāṁcanaacchāyā sastre taḥ śārāśanīḥ /// -ibid. XIX. 11}
of canto XVII, how the warriors wore *kavaca*. The uses of *dhanuṣ, sarah, vānah, khādgah* in verses 12-15 and 74 of Chapter XIX in the *Śiśupālavadha* indicate Māgha's awareness of these weapons. Like Kauṭilya, Māgha also seems to be aware of the uses of *kaṅcuka*, i.e. a jacket up to the knee joint by the warriors, (in verse (*śloka*) XVII. 22 of the *kāvyā*). He also describes the use of *āvarana* to cover the bodies of animals of war for their protection.

In case of *āvarana*, one can find that Māgha in verse XVIII. 29 of his *kāvyā* refers to *netrāvaranāṁ* of elephants (*cakṣūrvāranaṁ vāraṇasya*).47

From the above discussion, we may draw inference that there are some resemblance in respect of arms and weapons of modern age to those of the earlier periods. We may cite the instance of bow and arrows resembling to gun and bullets of modern times. Again, one might find some sort of similarities between nuclear weapons and *śakti* etc. Thus it can be said that some other weapons mentioned in the *Arthaśāstra*, the *Śiśupālavadha* bear some resemblance to the modern weapons.

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46. *muhuḥ pratiskhalitaparāyudhā yudhi sthavīyaśīrcaalanitambani rbharah/ adāṁśayannarahitaśauryadvānāśanītārayaṁ naya iti vrṣṇiḥūbhṛtaḥ//
   durudvahāḥ kṣanamaparaistadantare rapanāvadupacayamāśu
   bibhrati /

   mahābhujāṁ mahimabhṛtaṁ na saṁgmamumudo'ntarā vapaśi vahīṣca
   kaṅcukāḥ// -ibid. XVII. 21-22.

47. *tūraṁ yāvanāpanīnye niśādī vāsaścakṣūrvāraṇāṁ vāraṇasya /
   tāvātāpūrgeirānayagādhirūḍhāḥ kādambānāmekapātai rasīvyaḥ //
   -ibid. XVIII. 29.